

30 April 2012

Off-Site Vapor Intrusion Assessment
Former CENCO Refinery
12345 Lakeland Road, Santa Fe Springs, CA

SLIC No. 0318, ID No. 2040071
CAO 97-118

Prepared on Behalf of

Isola Law Group, LLP
Lodi, California

Prepared for

Regional Water Quality Control Board
Los Angeles Region

Prepared By

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1.0 INTRODUCTION

On behalf of Isola Law Group, LLP, Murex Environmental Inc. (Murex) has prepared this *Off-Site Vapor Intrusion Assessment* for Lakeland Development Company (Lakeland) for properties adjacent to the former refinery located at 12345 Lakeland Road in Santa Fe Springs, California (Site; see **Figure 1**).

1.1 Purpose

In 2011, Murex performed an off-Site soil gas survey involving properties adjacent to the Site to the west and south; results were presented in a summary report (discussed below). Within the study area, located immediately south and west of the facility, direct push soil gas probes were installed and sampled and were given the designation “OS” (i.e., off-Site). These OS sample locations are shown on **Figure 2**. The main objective of this report is to document the analysis of the OS soil gas data using a human health risk assessment (HRA).

1.2 Background

A LARWQCB letter dated July 21, 2010, titled “Requirements for Subsurface Investigation and Cleanup Pursuant to Cleanup and Abatement Order (CAO) No 97-118, Former Powerine/CENCO Refinery,” requested a study of soil gas on adjacent properties to the west and south of the Site, which was to include the Metropolitan Hospital property.

Murex submitted the *Addendum to the Revised Off-Site Soil Gas Survey Workplan* on September 3, 2010. This workplan received approval from LARWQCB in their April 13, 2011 letter, titled “Approval of Work Plan for Off-Site Soil Gas Survey, Pursuant to California Water Code Section 13304 Cleanup and Abatement Order No. 97-118 (**Appendix A**).

Acquiring access permission to perform sampling on the properties located to the west required an extended period of time. Murex completed the soil gas survey on the properties to the south while engaging assistance from the LARWQCB to gain access from western property owners. The LARWQCB also provided the August 30, 2011 letter, titled “Approval of Time Extension for Submittal of Report of Soil Gas Survey Pursuant to California Water Code Section 13304 Cleanup and Abatement Order No. 97-118” (**Appendix A**). This letter approved a deadline extension for the submittal of the technical report of findings to November 15, 2011.

On November 7, 2011, Murex submitted the “Off-Site Soil Gas Survey Report” to LARWQCB outlining the results of the off-site soil gas survey conducted June through September of 2011.

Murex and Isola Law Group met with the LARWQCB and DTSC on February 28, 2012. During the meeting, the DTSC requested that Murex analyze the 2011 soil gas data using a simplified HRA utilizing the Johnson and Ettinger model approach, and provide this analysis in a separate document for their review.

1.3 Site Description and History

The former Cenco refinery Site is approximately 55 acres in size and is bordered to the north by Florence Avenue, to the south by Lakeland Road, and to the east by Bloomfield Avenue (**Figure 1**). The site was operated as an oil refinery from the 1930s until July 1995. Oil-production-related structures such as ponds and aboveground holding tanks may have also been located onsite during these years (Haley & Aldrich, Inc. [Haley & Aldrich], 2005). The refinery ceased operations in July 1995. Since then, refinery structures, such as tanks, overhead piping, and other infrastructure, have been removed in stages. The remaining refinery structures are scheduled to be removed for reuse elsewhere or recycling prior to the redevelopment of the property for commercial/industrial use.

Previous refining operations included processing crude oil into several grades of fuel including kerosene, leaded gasoline and aviation fuel, unleaded gasoline, jet fuel, high and low-sulfur diesel, fuel oil, and petroleum coke. Soil and groundwater quality beneath and in proximity to the site have been impacted by accidental spills. Soil and groundwater investigations are being conducted pursuant to the CAO.

1.4 Description of Study Area

The Site is bordered on all sides by commercial and industrial properties. Specifically, the western and southern Site boundaries, as well as four properties to the west and two properties to the south were the subject of the off-Site soil vapor study.

Table I describes the location, property address, property use, and historic property use for each vapor sample. **Figure 2** shows an aerial view of the Site vicinity. The four properties located to the west of the Site are commercial/industrial, and are used for warehousing, industrial equipment storage, sales and repairs, auto wrecking, and commercial office.

The property due south of the Site, (i.e., “Coaster” property), located at 12354 Lakeland Road was once part of the Powerine Refinery operations. It housed administrative offices, gasoline filling lines for trucks, as well as storage tanks and worker facilities.

South of the former Powerine property is the Norwalk/Metropolitan State Hospital, a mental health facility that encompasses an entire campus of facility operations, health care facilities, administrative offices, security and engineering offices, a power plant, institutional prisoner housing, and staff housing.

2.0 DISCUSSION OF DATA

2.1 Summary of Investigation Findings

The active soil gas survey yielded detections of TPHg and gasoline-related VOCs. The majority of these detections occurred on the Coaster property to the south, across Lakeland Road. A summary of all analytical results can be found in **Table II**.

2.1.1 Benzene

Benzene was detected in the active soil gas testing in 15 unique probes out of 83; 10 occurrences in Zone A (5 feet-bgs) and 7 in Zone B (10 ft-bgs).

Along the Site property line, benzene was detected once in Zone B at 770 ug/L and ranged from 0.0034 to 0.0044 ug/L in Zone A. On the properties west of the Site, benzene detections ranged from 0.056 ug/L to 1.4 ug/L in Zone A and from 0.11 to 0.12 ug/L in Zone B. On the Coaster property to the south, benzene detections ranged from 0.16 to 5.1 ug/L in Zone A and from 4.8 to 200 ug/L in Zone B. Benzene was not detected in any probes located on the Metropolitan Hospital property. Detections from the active soil gas survey do not appear to correlate with the benzene concentrations in groundwater.

2.1.2 TPHg

TPHg was detected in the active soil gas testing in 20 unique sampling locations; 8, plus four confirmation samples, in Zone A (5 feet-bgs) and 12 in Zone B (10 ft-bgs).

Along the Site property line, TPHg was detections ranged from 1.2 ug/L to 1,900 ug/L in Zone A and from 1,400 ug/L to 30,000 ug/L in Zone B. On the properties west of the Site, TPHg detections ranged from 1.8 ug/L to 340 ug/L in Zone A and from 1,100 ug/L to 2,900 ug/L in Zone B. On the Coaster (former Lakeland) property to the south, TPHg detections ranged from 820 ug/L to 52,000 ug/L in Zone A and from 1,600 ug/L to 99,000 ug/L in Zone B. TPHg was detected once on the Metropolitan Hospital property at 3,400 ug/L. TPHg concentrations detected in soil gas do not appear to correlate to those found in groundwater.

2.1.3 Other Compounds Detected

Tetrachloroethylene (PCE) was detected in two field samples at concentrations of 0.13 µg/L and 0.61 µg/L. It was also detected in two confirmation samples at concentrations of 0.0075 µg/L and 0.011 µg/L.

Vinyl Chloride (VC) was detected at only one sampling location, OS-V012-A, at a concentration of 0.23 µg/L.

1,1-Dichloroethene (1,1-DCE) was detected in one location, OS-V021-A, at a concentration of 1.0 µg/L.

1,3,5-Trimethylbenzene (1,3,5-TMB) was detected in two confirmation samples at concentrations of 0.01 and 0.0062 µg/L.

1,2,4-Trimethylbenzene (1,2,4-TMB) was detected at 5 locations within a range of 0.007 µg/L and 98 µg/L.

Toluene was detected at 6 locations within a range of 0.0056 and 2,000 µg/L. Ethylbenzene was detected in five locations ranging in concentration from 0.0044 µg/L to 260 µg/L. Xylenes were also detected at the same five locations, ranging in concentration from 0.0099 µg/L to 1,200 µg/L. In all three of these compounds, the maximum concentrations were detected at 10 ft-bgs, but the highest number of detections found was at 5 ft-bgs.

N-propylbenzene was detected in one location at a concentration of 27 µg/L. Isopropylbenzene (ISO-P) was detected in one location at a concentration of 1.0 µg/L. Methylene chloride (MC) was detected in one location at a concentration of 0.0036 µg/L.

Chloroform was detected in three samples ranging from 0.17 µg/L to 0.59 µg/L.

2.2 Discussion of Analysis Procedure

As discussed with the DTSC toxicologist, the only exposure pathway requested to be studied as a part of this study for hypothetical off-site receptors was the inhalation of volatile organic chemicals emitted from off-Site soil into indoor and outdoor air. While the indoor vapor inhalation pathway is incomplete for some of the off-Site properties, this analysis was performed assuming that all properties exhibited a complete exposure pathway for indoor vapor inhalation.

In accordance with DTSC guidance, Murex made the assumption that a hypothetical off-site commercial/industrial receptor spends all of their exposure time indoors. This is a conservative approach as model-predicted indoor air concentrations are greater than model-predicted outdoor air concentrations.

Murex used the USEPA implementation of the “Johnson and Ettinger model,” (J&E model (USEPA, 2004; Johnson, 1991)), along with standard risk equations, to derive risk-based concentrations in soil gas (soil gas RBCs) which were then used to calculate the sample-specific non-cancer hazard index (HI) and incremental lifetime cancer risk (ILCR) for future off-site hypothetical workers in a future default commercial/industrial building, in accordance with DTSC guidance (DTSC, 2011).

2.3 Data Usability Evaluation and Selection of Soil Gas Chemicals of Potential Concern (COPCs)

The soil gas data (**Table II**) were collected during June, July, and September 2011 at OS sampling locations (**Figure 2**) and analyzed for volatile organic chemicals (VOCs) using EPA Method 8260B and for total petroleum hydrocarbons as gasoline (C5 – C11) (TPHg) using DHS LUFT Method 8260B. Details regarding sample collection are provided in the Off-Site Soil Gas Survey Report (Murex, 2011).^[1] The laboratory reports for these sampling events are included as **Appendix B**. The laboratory reports were reviewed to ensure that the data meet the data usability (DU) criteria for HRA. A summary of the DU evaluation is also provided in **Appendix B**.

COPCs were identified as any VOC detected at depths of 5 and 10 feet below ground surface (ft-bgs) in at least one OS sample at either depth; as appropriate, therefore, sample-specific HI and ILCR values were calculated for both depths. This subset of detected VOCs (with the exception of TPHg) are hereafter referred to as soil gas chemicals of potential concern (soil gas COPCs). Based on current DTSC guidance, TPH was not considered a COPC for the HRA. The soil gas COPCs are listed in **Table III**.

2.4 J&E Model-Predicted Attenuation Coefficients

The J&E model incorporates both convective and diffusive mechanisms for estimating the transport of vapors emanating from impacted subsurface media into indoor spaces. The primary output generated by the J&E model, and that used to quantify this transport, is the “Infinite Source Attenuation Coefficient” (the ratio of the indoor air concentration to the source term expressed as a subsurface soil gas concentration), α .

¹ Samples were collected in accordance with the Revised Off-Site Soil Gas Survey Workplan, which was approved by the Regional Water Quality Control Board (Los Angeles Region) in their April 13, 2011 letter, titled “Approval of Work Plan for Off-Site Soil Gas Survey”, Pursuant to California Water Code Section 13304 Cleanup and Abatement Order No. 97-118.

The major assumption/limitation of the J&E model is that the model is one-dimensional and transport is directed exclusively into the building. That is, vapors are conservatively assumed to only migrate upward from the impacted subsurface media and into the building. Lateral deflection due to the presence of low permeability units and non-upward diffusion is conservatively ignored in the model. Additionally, the model assumes that the vapors have already arrived at their peak concentration at the floor slab of the building – regardless of the depth to the top of contamination - and that the source concentration is constant.

Other assumptions/limitations of the J&E Model are as follows (USEPA, 2004):

- Contaminant vapors enter the structure primarily through cracks and openings in the walls and foundation.
- Convective transport occurs primarily within the building zone of influence and vapor velocities decrease rapidly with increasing distance from the structure.
- Diffusion dominates vapor transport between the source of contamination and the building zone of influence.
- All vapors originating from below the building will enter the building unless the floors and walls are perfect barriers.
- All soil properties in any horizontal plane are homogenous.
- The contaminant is homogeneously distributed within the zone of contamination.
- The areal extent of contamination is greater than that of the building floor in contact with the soil.
- Vapor transport occurs in the absence of convective water movement within the soil column (*i.e.*, evaporation or infiltration), and in the absence of mechanical dispersion.
- The model does not account for transformation processes (*e.g.*, biodegradation, hydrolysis, *etc.*).
- The soil layer in contact with the structure floor and walls is isotropic with respect to permeability.
- Both the building ventilation rate and the difference in dynamic pressure between the interior of the structure and the soil surface are constant values.

2.4.1 Inputs to the J&E Model

Inputs to the J&E model include the chemical-specific chemical properties, soil properties, and building properties. The chemical properties are the default values coded into the J&E model as downloaded from the USEPA website. Site-specific parameters include soil types, bulk density, total porosity, and moisture content as collected during historical investigations and listed in **Table IV** and temperature (20°C based on www.weather.com).

As shown in **Table IV**, one sample was used to characterize the 5-foot depth (B231-5) and two were used to characterize the 10-foot depth (B232-10 and B241-10). Because the sample from B232-10 had a lower moisture content-to-porosity ratio (saturation) than that for B241-10 and thus gave more conservative results, it was used to calculate the RBCs for the 10-foot samples. Other input parameters are based on default values set forth in CalEPA's Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil (CalEPA, 2005a) and shown in a sample 'DATAENTER' worksheet included as **Appendix C**^[2].

2.4.2 J&E Model Output (Results)

The attenuation coefficients for each COPC and sample depth are listed in **Table V** and **Table VI**, respectively, and range from approximately to 1×10^{-4} to 2×10^{-4} (for the 5-foot samples) and 3×10^{-5} to 5×10^{-5} (for the 10-foot samples). A sample 'INTERCALCS' worksheet is included as **Appendix D**^[3].

2.5 Soil Gas RBCs

Soil gas RBCs were calculated to streamline the risk characterization process consistent with, and using the ratio approach set forth in, CalEPA guidance (Section 6 of CalEPA, 2005a and Section 2.8 of CalEPA, 2005b). The 'RBC-ratio approach' for risk characterization approach is also set forth in USEPA guidance (Section 5.13.2 of USEPA, 2011). This approach (1) has the advantage of allowing sample-specific risks to be calculated which can then be used to clearly identify areas of the study area that require further characterization and/or remediation and those that do not and (2) is more realistic than simply using maximum concentrations to characterize risk over an entire site or some pre-determined (and often impractical) exposure area. The approach is also very conservative in that it implicitly assumes the receptor is exposed to an individual sample as opposed to an average concentration over an exposure area (*e.g.*, a 95th UCL).

The soil gas RBCs for the 5- and 10-foot soil gas samples are shown in **Table V** and **Table VI**, respectively, and are calculated for the noncancer (for all COPCs) and cancer endpoints (for the carcinogenic COPCs only) as follows:

$$RBC_{COPC,NC} = \frac{THQ \times AT_{NC}}{EF \times ED \times ET \times \alpha_{COPC}} \times REL_{COPC} \quad \text{Eqn. 1}$$

² The sample 'DATAENTER' worksheet shown is for benzene in OS-V034-B (10-foot soil gas sample depth).

³ The sample 'INTERCALCS' worksheet shown is for benzene in OS-V034-B (10-foot soil gas sample depth).

$$RBC_{COPC,C} = \frac{TILCR \times AT_C}{EF \times ED \times ET \times \alpha_{COPC}} \times \frac{1}{IUR_{COPC}} \quad \text{Eqn. 2}$$

where:^[4]

RBC_{COPC,NC}: COPC-specific soil gas risk-based concentration based on non-cancer endpoint;

THQ: target hazard quotient (1.0 [unitless])^[5];

AT_{NC}: averaging time for noncancer endpoint (25 years [219,000 hours]);

EF: exposure frequency (250 days per year);

ED: exposure duration (25 years);

ET: exposure time (8 hours per day);

α: COPC- and site-specific J&E model-predicted “infinite source” attenuation coefficient for default commercial/industrial building (unitless)^[6];

REL_{COPC}: COPC-specific reference exposure level (ug/m³);

RBC_{COPC,C}: COPC-specific soil gas risk-based concentration based on cancer endpoint;

TILCR: target incremental lifetime cancer risk (1x10⁻⁵ [‘10-in-one-million’; unitless])^[7];

AT_C: averaging time for cancer endpoint (70 years [613,200 hours]); and

IUR_{COPC}: COPC-specific inhalation unit risk (ug/m³)⁻¹.

⁴ The values provided for **AT_{NC}**, **AT_C**, **EF**, and **ED** (exposure factors) and listed in **Table IVa** and **Table IVb** are from *Human and Ecological Risk Division (HERD, a division of CalEPA/DTSC), 2005. HHRA Note Number 1: Recommended DTSC Default Exposure Factors for Use in Risk Assessment at California Military Facilities. October 27.* The value for **ET** (an exposure factor) is from *USEPA, 2009. Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment), Final; Office of Superfund Remediation and Technology Innovation, Environmental Protection Agency, Washington, D.C. (EPA-540-R-070-002, OSWER 9285.7-82). January.* The values for **REL_{COPC}** and **IUR_{COPC}** (toxicity criteria) are selected from CalEPA sources as noted in the footnotes on **Table IVa** and **Table IVb**.

⁵ Default value.

⁶ As noted earlier in the introductory paragraph for **Section 2**, the attenuation coefficient is the ratio of the model-predicted concentration in indoor air to the soil gas concentration.

⁷ Commonly applied value to commercial/industrial sites.

As noted above, the values of α are calculated using the J&E model for a default commercial/industrial building consistent with California Environmental Protection Agency (CalEPA) guidance (CalEPA, 2011). The α values are calculated for the two sample depths (i.e., 5 ft bgs and 10 ft bgs) to allow for the calculation of depth-specific RBCs for each COPC.

2.6 Hazard Index (HI) and Incremental Lifetime Cancer Risk (ILCR) for Default Indoor Worker

The RBCs listed in **Table V** (for the 5-foot samples) and **Table VI** (for the 10-foot samples) for each COPC are used to calculate the sample-specific HI and ILCR values for the default indoor worker using the ratio approach set forth in CalEPA guidance (CalEPA, 2005b) to account for cumulative risk effects due to the presence of multiple COPCs in a given sample.

For non-cancer effects (all COPCs):

$$HQ_{COPC} = \frac{C_{COPC}}{RBC_{COPC,NC}} \times THQ \quad \text{Eqn. 3a}$$

where HQ_{COPC} is the COPC-specific hazard quotient, C_{COPC} is the sample-specific soil gas concentration, $RBC_{COPC,NC}$ is the COPC-specific soil gas risk-based concentration based on the noncancer endpoint, and THQ is the target hazard quotient (1.0). The HQ_{COPC} values for all COPCs for a given sample are then summed for all COPCs to calculate the sample-specific HI:

$$HI = \sum HQ_{COPC} \quad \text{Eqn. 3b}$$

Substituting **Eqn. 3a** into **Eqn. 3b** yields:

$$HI = \left(\frac{C_{COPC1}}{RBC_{COPC1,NC}} + \frac{C_{COPC2}}{RBC_{COPC2,NC}} + \dots + \frac{C_{COPCn}}{RBC_{COPCn,NC}} \right) \times 1.0 \quad \text{Eqn. 3c}$$

Similarly, for cancer effects (carcinogenic COPCs only):

$$ILCR_{COPC} = \frac{C_{COPC}}{RBC_{COPC,C}} \times TILCR \quad \text{Eqn. 4a}$$

where $ILCR_{COPC}$ is the COPC-specific incremental lifetime cancer risk, C_{COPC} is the sample-specific soil gas concentration, $RBC_{COPC,C}$ is the COPC-specific soil gas risk-based concentration based on the cancer endpoint, and $TILCR$ is the target incremental lifetime cancer risk (1×10^{-5}). The $ILCR_{COPC}$ values for all COPCs for a given sample are then summed for all COPCs to calculate the sample-specific ILCR:

$$ILCR = \sum ILCR_{COPC} \quad \text{Eqn. 4b}$$

Substituting **Eqn. 4a** into **Eqn. 4b** yields:

$$ILCR = \left(\frac{C_{COPC1}}{RBC_{COPC1,C}} + \frac{C_{COPC2}}{RBC_{COPC2,C}} + \dots + \frac{C_{COPCn}}{RBC_{COPCn,C}} \right) \times 1E-05 \quad \text{Eqn. 4c}$$

2.6.1 HI and ILCR Values for the 5-Foot Soil Gas Samples

Of the forty-nine 5-foot samples, fourteen contained detectable concentrations of at least one COPC (**Table VII**). **Table VIII** shows the sample-specific HI and ILCR calculation for these fourteen samples. None of the fourteen 5-foot sample-specific HI values exceed the target HI value of 1 ($1E+00$) indicating that there is no potential for adverse non-cancer effects. Similarly, none of the fourteen 5-foot samples exceed the commercial/industrial target ILCR of 1×10^{-05} .

2.6.2 HI and ILCR Values for the 10-Foot Soil Gas Samples

Of the 55 10-foot samples, sixteen contained detectable concentrations of at least one COPC (**Table IX**). **Table X** shows the sample-specific HI and ILCR calculation for these sixteen samples. None of the sixteen 10-foot sample-specific HI values exceed the target HI value of 1 ($1E+00$) indicating that there is no potential for adverse non-cancer effects. Two of the sixteen 10-foot samples (OS-V029-B at 8×10^{-05} and OS-VO33-B [CONF] at 2×10^{-05}) exceed the commercial/industrial target ILCR of 1×10^{-05} . The benzene concentrations in these two samples (770 ug/L and 200 ug/L, respectively) account for 98% and 100% of the ILCR values, respectively.

3.0 CONCLUSIONS

Murex performed the J&E Model study to provide the DTSC with an overview and conservative estimate of the potential human health effects relative to the results of off-Site soil gas testing, conducted in 2011, on properties adjacent to the Site. The study area included commercial properties to the west, commercial properties to the south, and the Metropolitan State Hospital, also located to the south.

The results of the study indicate that two samples, positioned at depths of 10 ft-bgs and both located on the former Lakeland Property (i.e., “Coaster” property) may present an unacceptable health risk to a theoretical commercial worker at those two sample-specific locations. The samples are OS-V029-B (theoretical cancer risk equal to 8×10^{-05}) and OS-V033-B [CONF] (theoretical cancer risk equal to 2×10^{-05}). The chemical responsible for this theoretical risk is benzene.

As discussed above, the assumptions integral to this set of calculations assume that a complete pathway between the contaminated soil and the indoor commercial worker exists. However, with the case of the Coaster property building, the pathway is incomplete. Murex has been informed that in fact, the commercial building situated on the Coaster property is a modern concrete warehouse building, constructed in the late 1990's, and equipped with a vapor barrier and passive sub-slab gas venting system. We understand from parties knowledgeable of the property redevelopment that the developers of this property were aware of the historical use of the property, which included storage and truck filling for gasoline and diesel fuel. Given this historical use, the known condition of legacy soil impacts, and the widespread presence of methane in the vicinity, the builders chose to equip this building with engineering controls to mitigate vapor intrusion.

Therefore, no unacceptable human health risk, either carcinogenic or non-carcinogenic, is currently present as a result of soil vapor conditions within the study area. This includes the Metropolitan State Hospital property, where VOCs were not detected.

4.0 CLOSING

I certify under penalty of law that this document and all enclosures were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information contained herein is, to the best of my knowledge and belief, true, accurate and complete, however, is reliant upon public agency records, which could be incomplete or inaccurate beyond our control.

Should you have any questions or concerns regarding the material herein, please do not hesitate to contact the undersigned at (714) 508-0800.

Sincerely,

MUREX ENVIRONMENTAL, INC



Jeremy R Squire, P.E.
Senior Engineer



Teri L. Copeland, DABT
Health Risk Assessor

5.0 REFERENCES

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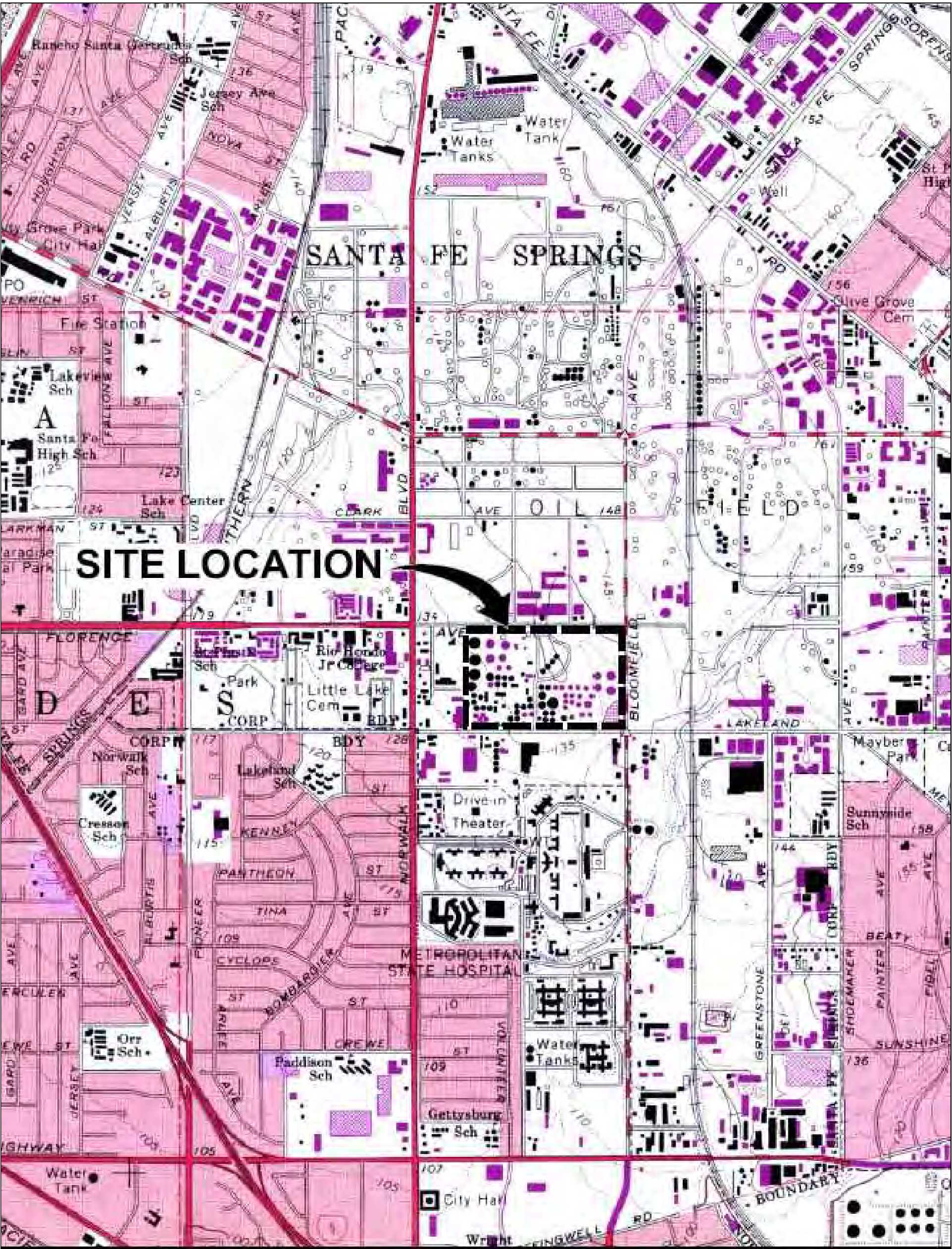
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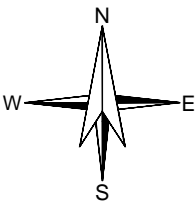
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SOURCE OF BASE MAP
U.S. GEOLOGICAL SURVEY, 7.5 MIN QUAD., WHITTIER, CA. 1965, PHOTOREVISED 1981



SCALE: NOT TO SCALE

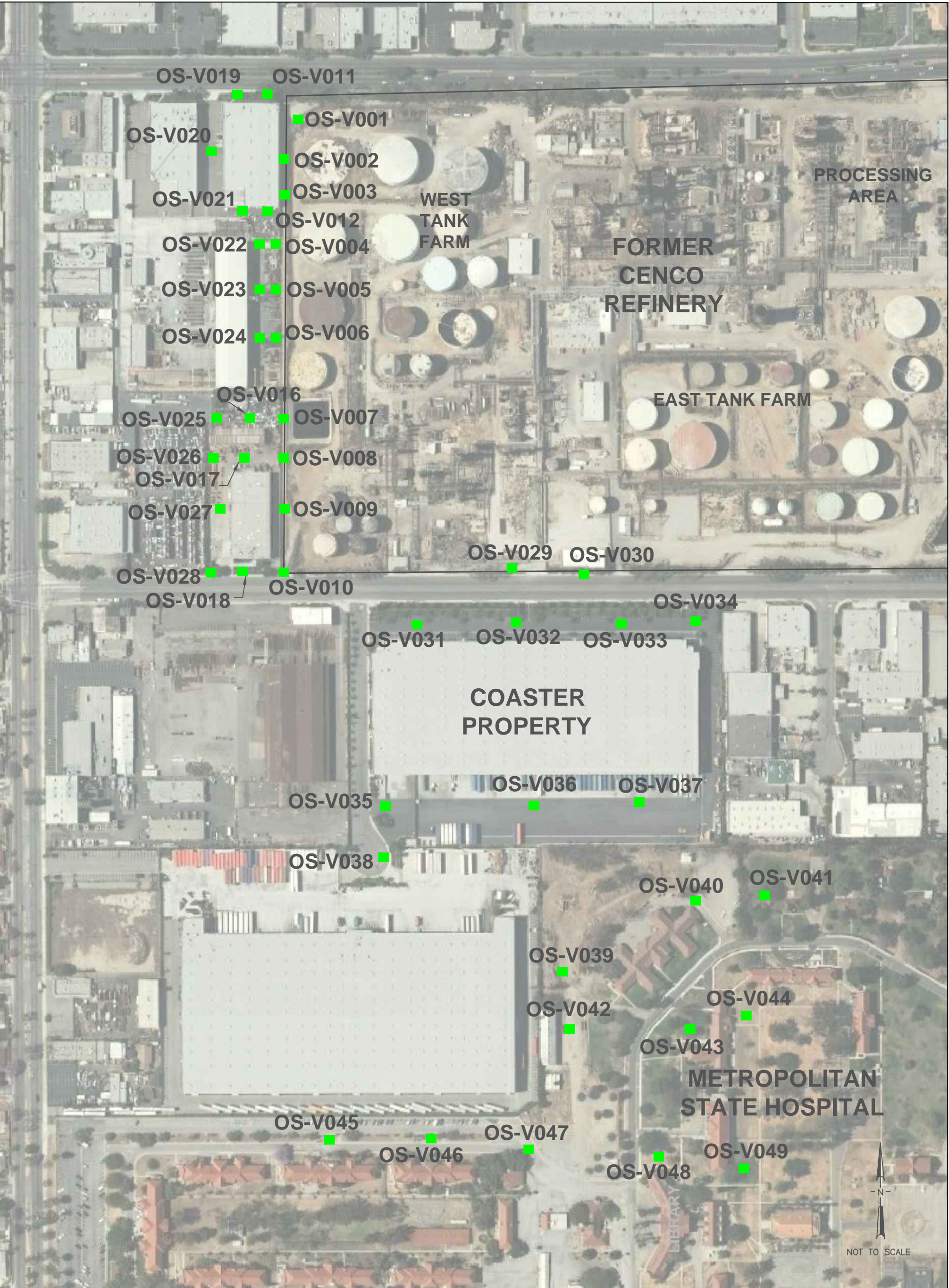
CENCO REFINING COMPANY
12345 LAKELAND ROAD
SANTA FE SPRINGS, CALIFORNIA

SITE LOCATION MAP



FIGURE
1

DRAWN BY: RLM REVISION DATE: 8/27/10



LEGEND

OS-V001

SOIL-GAS SAMPLE LOCATIONS

CENCO REFINING COMPANY
12345 LAKELAND ROAD
SANTA FE SPRINGS, CALIFORNIA

SITE PLAN SHOWING SOIL GAS
SAMPLING LOCATIONS



FIGURE
2

Table I
OFF-SITE SOIL GAS SAMPLE LOCATIONS
Former CENCO Refinery
Santa Fe Springs, CA

Sample ID	Location	Address	Current Use	Historical Use/Notes
OS-V001	Western Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V002	Western Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V003	Western Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V004	Oil Well Service Co.	10840 Norwalk Blvd	Industrial Operations - oil production well services	Former Steel Cable Production Facility
OS-V005	Oil Well Service Co.	10840 Norwalk Blvd	Industrial Operations - oil production well services	Former Steel Cable Production Facility
OS-V006	Oil Well Service Co.	10840 Norwalk Blvd	Industrial Operations - oil production well services	Former Steel Cable Production Facility
OS-V007	Western Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V008	Western Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V009	Western Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V010	Western Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V011	Fortune Resources	12234 Florence Ave	Commercial/Industrial - Warehouse, office, production	
OS-V012	Fortune Resources	12234 Florence Ave	Commercial/Industrial - Warehouse, office, production	
OS-V016	LKQ Southern California	10950 Norwalk Blvd	Industrial Operations - Scrap Yard for Used Auto Parts	
OS-V017	D ³ Equipment Case	12247 Lakeland Rd	Industrial Operations - Sale and Repair of Tractors and Backhoes	
OS-V018	D ³ Equipment Case	12247 Lakeland Rd	Industrial Operations - Sale and Repair of Tractors and Backhoes	
OS-V019	Fortune Resources	12234 Florence Ave	Commercial/Industrial - Warehouse, office, production	
OS-V020	Fortune Resources	12234 Florence Ave	Commercial/Industrial - Warehouse, office, production	
OS-V021	Fortune Resources	12234 Florence Ave	Commercial/Industrial - Warehouse, office, production	
OS-V022	Oil Well Service Co.	10840 Norwalk Blvd	Industrial Operations - oil production well services	Former Steel Cable Production Facility
OS-V023	Oil Well Service Co.	10840 Norwalk Blvd	Industrial Operations - oil production well services	Former Steel Cable Production Facility
OS-V024	Oil Well Service Co.	10840 Norwalk Blvd	Industrial Operations - oil production well services	Former Steel Cable Production Facility
OS-V025	LKQ Southern California	10950 Norwalk Blvd	Industrial Operations - Scrap Yard for Used Auto Parts	
OS-V026	D ³ Equipment Case	12247 Lakeland Rd	Industrial Operations - Sale and Repair of Tractors and Backhoes	
OS-V027	D ³ Equipment Case	12247 Lakeland Rd	Industrial Operations - Sale and Repair of Tractors and Backhoes	
OS-V028	D ³ Equipment Case	12247 Lakeland Rd	Industrial Operations - Sale and Repair of Tractors and Backhoes	
OS-V029	Southern Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V030	Southern Site Border	12345 Lakeland Rd	Industrial Operations - Lakeland Wastewater Processing	Former Powerine Refinery
OS-V031	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V032	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V033	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V034	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V035	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V036	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V037	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V038	Coaster Company	12354 Lakeland Rd	Logistics; Distribution and Warehouse	Former Powerine Gasoline Filling & Admin
OS-V039	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V040	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V041	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V042	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V043	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V044	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V045	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V046	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V047	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V048	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences
OS-V049	Met. State Hospital	11401 Bloomfield Ave	California Mental Health Facility	Includes institutional housing and single family residences

Table II
Summary of Total Petroleum Hydrocarbon (TPH) and VOC Results
Former CENCO Refinery
Santa Fe Springs, CA

Sample ID	Sample Depth (feet bgs)	Sample Date	TPH-g	PCE	TCE	1,1-DCE	1,3,5-TMB	1,2,4-TMB	VC	B	T	E	X	nPRO	CBNZ	ISO-P	MC	NAP	DIPE	MTBE	TBA	Chloroform
All units in µg/L																						
OS-V024-A	5	7/11/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V026-B	10	9/20/2011	<200	0.13	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V027-A	5	9/20/2011	<200	<0.40	<0.40	<2	<2	<2	<0.16	<0.40	<4	<2	<2	<2	<0.40	<2	<2	<0.40	<4	<2	<20	<0.40
OS-V027-B	10	9/20/2011	<200	<0.40	<0.40	<2	<2	<2	<0.16	<0.40	<4	<2	<2	<2	<0.40	<2	<2	<0.40	<4	<2	<20	<0.40
OS-V028-A	5	9/20/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	1.0	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V028-B	10	9/20/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V028-B (DUP)	10	9/20/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V029-B	10	7/1/2011	30,000	<4	<4	<20	40	98	<1.6	770	2000	260	1200	27	<4	<20	<20	<4	<40	<20	<200	<4
OS-V030-B	10	7/13/2011	1,400	<0.40	<0.40	<2	<2	<2	<0.16	<0.40	<2	<2	<2	<2	<0.40	<2	<2	<0.40	<4	<2	<20	<0.40
OS-V030-B (DUP)	10	7/13/2011	1,400	<0.40	<0.40	<2	<2	<2	<0.16	<0.40	<2	<2	<2	<2	<0.40	<2	<2	<0.40	<4	<2	<20	<0.40
OS-V031-A	5	6/30/2011	1,100	<1	<1	<5	<5	<5	<0.40	<1	<10	<5	<5	<5	<1	<5	<5	<1	<10	<5	<50	<1
OS-V031-B	10	6/30/2011	8,000	<4	<4	<20	<20	<20	<1.6	<4	<40	<20	<20	<20	<4	<20	<20	<4	<40	<20	<200	<4
OS-V032-A	5	6/29/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V032-B	10	6/29/2011	1,400	0.61	<0.20	<1	<1	<1	<0.08	<0.20	<2	<1	<1	<1	<0.20	<1	<1	<0.20	<2	<1	<10	<0.20
OS-V033-A	5	6/29/2011	820	<1	<1	<5	<5	<5	<0.40	5.1	<10	<5	<5	<5	<1	<5	<5	<1	<10	<5	<50	<1
OS-V033-B	10	6/29/2011	12,000	<4	<4	<20	<20	<20	<1.6	88	<40	<20	<20	<20	<4	<20	<20	<4	<40	<20	<200	<4
OS-V032-B (DUP)	10	6/29/2011	1,600	0.53	<0.20	<1	<1	<1	<0.08	<0.20	<2	<1	<1	<1	<0.20	<1	<1	<0.20	<2	<1	<10	<0.20
OS-V033-B (CONF)	10	6/29/2011	14,000	<6.9	<5.5	<4	<5	<5	<2.6	200	7.6	<4.4	<8.8	NA	<4.7	NA	<3.5	NA	<4.2	<3.7	<6.1	<5
OS-V034-A	5	6/29/2011	2,300	<0.40	<0.40	<2	<2	<2	<0.16	3.6	<4	<2	<2	<2	<0.40	<2	<2	<0.40	<4	<2	<20	<0.40
OS-V034-B	10	6/29/2011	14,000	<1	<1	<5	<5	<5	<0.40	40	<10	<5	<5	<5	<1	<5	<5	<1	<10	<5	<50	<1
OS-V034-B	10	6/30/2011	12,000	<2	<2	<10	<10	<10	<0.08	49	<20	<10	<10	<10	<2	<10	<10	<2	<20	<10	<100	<2
OS-V035-A	5	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V035-B	10	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V036-A	5	6/28/2011	1,200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	0.16	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V036-B	10	6/28/2011	72,000	<1.3	<1.3	<6.7	<6.7	<6.7	<0.54	4.8	<13	<6.7	<6.7	<6.7	<1.3	<6.7	<6.7	<1.3	<13	<6.7	<67	<1.3
OS-V037-A	5	6/28/2011	52,000	<0.13	<0.13	<0.67	<0.67	<0.67	<0.05	0.58	<1.3	<0.67	<1.3	<0.67	<0.13	<0.67	<0.67	<0.13	<1.3	<0.67	<6.7	<0.13
OS-V037-B	10	6/28/2011	99,000	<1	<1	<5	<5	<5	<0.40	31	<10	<5	<5	<5	<1	<5	<5	<1	<10	<5	<50	<1
OS-V038-A	5	6/29/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V038-B	10	6/29/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V039-A	5	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V039-B	10	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V040-A	5	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V040-B (1PV)	10	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V040-B (3PV)	10	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V040-B (7PV)	10	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V041-A	5	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V041-B	10	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V042-A	5	6/27/2011	2,000	<0.20	<0.20	<1	<1	<1	<0.08	<0.20	<2	<1	<1	<1	<0.20	<1	<1	<0.20	<2	<1	<10	<0.20
OS-V042-B	10	6/27/2011	2,700	<0.40	<0.40	<2	<2	<2	<0.16	<0.40	<2	<2	<2	<2	<0.40	<1	<2	<0.40	<4	<2	<20	0.59
OS-V042-B (DUP)	10	6/27/2011	3,100	<0.40	<0.40	<2	<2	<2	<0.16	<0.40	<2	<2	<2	<2	<0.40	<1	<2	<0.40	<4	<2	<20	<0.40
OS-V042-B (CONF)	10	6/27/2011	3,400	<0.69	<0.55	<0.40	<0.50	<0.50	<0.26	<0.32	<0.38	<0.44	<0.88	NA	<0.47	NA	<0.35	NA	<0.42	<0.37	<0.61	<500
OS-V043-A	5	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V043-B	10	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V044-A	5	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V044-B	10	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10

Table II
Summary of Total Petroleum Hydrocarbon (TPH) and VOC Results
Former CENCO Refinery
Santa Fe Springs, CA

Sample ID	Sample Depth (feet bgs)	Sample Date	TPH-g	PCE	TCE	1,1-DCE	1,3,5-TMB	1,2,4-TMB	VC	B	T	E	X	nPRO	CBNZ	ISO-P	MC	NAP	DIPE	MTBE	TBA	Chloroform
All units in µg/L																						
OS-V045-A	5	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V045-B	10	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V046-A	5	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V046-B	10	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	0.19
OS-V046-B (DUP)	10	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	0.17
OS-V047-A	5	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V047-B	10	6/28/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V048-A	5	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V048-B	10	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V049-A	5	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10
OS-V049-B	10	6/27/2011	<200	<0.10	<0.10	<0.50	<0.50	<0.50	<0.04	<0.10	<1	<0.50	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<1	<0.50	<5	<0.10

NOTES:

PCE - Tetrachloroethylene

TCE - Trichloroethylene

c1,2-DCE - cis-1,2-Dichloroethene

t1,2-DCE - trans-1,2-Dichloroethene

1,1-DCE - 1,1-Dichloroethene

1,2-DCA - 1,2-Dichloroethane

1,3,5-TMB - 1,3,5-Trimethylbenzene

1,2,4-TMB - 1,2,4-Trimethylbenzene

VC - Vinyl Chloride

B- Benzene

T - Toluene

E - Ethylbenzene

X - Xylenes, total

sBUT - sec-Butylbenzene

nPRO - n-Propylbenzene

CBNZ - Chlorobenzene

1,1 DCA - 1,1-Dichloroethane

ISO-P - Isopropylbenzene

MC - Methylene Chloride

NAP - Naphthalene

TRIM - Trichlorofluoromethane

DIPE - Diisopropyl Ether (DIPE)

MTBE - Methyl-tert-Butyl Ether (MTBE)

TBA - tert-Butyl Alcohol (TBA)

TPHg - Total Petroleum Hydrocarbons, gasoline range

ND - Not Detected above laboratory detection limits

ug/L - Micrograms per litre

NA - Information not available

- - Not Tested

J - Indicates concentration above method detection limit but below practical quantitation limit

(DUP) - duplicate sample

(CONF) - confirmation sample; analyzed by EPA Method TO-15

Table III
SOIL GAS CHEMICALS OF POTENTIAL CONCERN (SOIL GAS COPCS)
Former CENCO Refinery
Santa Fe Springs, CA

COPC	Detected in at least one 5-foot sample	Detected in at least one 10-foot sample
1,1-Dichloroethene (1,1-DCE)	Yes	No
1,2,4-Trimethylbenzene (1,2,4-TMB)	Yes	Yes
1,3,5-Trimethylbenzene (1,3,5-TMB)	Yes	Yes
Benzene	Yes	Yes
Chloroform	No	Yes
Ethylbenzene	Yes	Yes
Isopropylbenzene	Yes	No
Methylene Chloride	Yes	No
n-Propylbenzene	No	Yes
Tetrachloroethene	Yes	Yes
Toluene	Yes	Yes
Total Xylenes	Yes	Yes
Vinyl Chloride	Yes	No

Table IV
SOIL PHYSICAL PARAMETERS FOR SAMPLES IN UPPER 10 FEET
Former CENCO Refinery
Santa Fe Springs, CA

Parameter	Units	B231-5	B232-10	B241-10
		5 feet 1/17/2008	10 feet 1/21/2008	10 feet 1/23/2008
Moisture	$\text{cm}^3_{\text{Water}}/\text{cm}^3_{\text{Total}}$	0.196	0.304	0.286
Dry bulk density	$\text{g}_{\text{Soil}}/\text{cm}^3_{\text{Total}}$	1.65	1.44	1.65
Porosity*	$\text{cm}^3_{\text{Pore}}/\text{cm}^3_{\text{Total}}$	0.377	0.457	0.377
Saturation**	$\text{cm}^3_{\text{Water}}/\text{cm}^3_{\text{Pore}}$	0.519	0.666	0.758
Gravel and Sand	%	83.3	48.4	16.7
Silt and Clay	%	16.7	NA	NA
Silt	%	NA	45.6	58.6
Clay	%	NA	6.0	24.7
Total	%	100.0	100.0	100.0
Soil Type***	-	Loamy sand	Sandy loam/Loam	Silt loam

* Calculated using dry bulk density and an assumed soil grain density of $2.65 \text{ g}_{\text{Grain}}/\text{cm}^3_{\text{Grain}}$.

** Calculated as the ratio of moisture to porosity using dry bulk density and an assumed soil grain density of $2.65 \text{ g}_{\text{Grain}}/\text{cm}^3_{\text{Grain}}$.

*** Based on Figure 3 of USEPA, 2004. The loamy sand soil type identified for B231-5 assumes that there is no clay; that is, there is 83.3% gravel and sand and an assumed value of 16.7% silt.

Table V
ATTENUATION FACTORS (α VALUES) AND CALCULATION OF SOIL GAS RBCs FOR VOCs DETECTED IN SOIL GAS (5-FT SAMPLE DEPTH)
DEFAULT INDOOR WORKER - DEFAULT INDUSTRIAL BUILDING (WITH ENGINEERED FILL)
(Based on B231-5 Site-Specific Soil Physical Parameters and 5-Ft Sample Depth)
Former CENCO Refinery
Santa Fe Springs, CA

COPC	CAS No.	α ($\mu\text{g}/\text{m}^3 / \mu\text{g}/\text{m}^3$; unitless)	THQ (-)	ILCR (-)	AT _{NC} (hrs)	AT _C (hrs)	EF (days/yr)	ED (yr)	ET (hrs/day)	REL ($\mu\text{g}/\text{m}^3$)	IUR ($\mu\text{g}/\text{m}^3$) ⁻¹	RBC _{HI} ($\mu\text{g}/\text{L}$)	RBC _{ILCR} ($\mu\text{g}/\text{L}$)
1,1-DICHLOROETHENE	75354	1.91E-04	1	1E-05	219000	613200	250	25	8	70	NA	1.61E+03	NA
1,2,4-TRIMETHYLBENZENE	95636	1.35E-04								7	NA	2.27E+02	NA
1,3,5-TRIMETHYLBENZENE	108678	1.34E-04								6	NA	1.95E+02	NA
BENZENE	71432	1.87E-04								60	2.9E-05	1.40E+03	2.26E+01
CHLOROFORM*	67663	2.15E-04								300	5.3E-06	6.11E+03	1.08E+02
ETHYLBENZENE	100414	1.63E-04								2000	2.5E-06	5.37E+04	3.01E+02
ISOPROPYLBENZENE	98828	1.44E-04								400	NA	1.22E+04	NA
METHYLENE CHLORIDE	75092	2.10E-04								400	1.0E-06	8.34E+03	5.84E+02
N-PROPYLBENZENE*	103651	1.34E-04								140	NA	4.57E+03	NA
TETRACHLOROETHENE	127184	1.57E-04								35	5.9E-06	9.74E+02	1.32E+02
TOLUENE	108883	1.85E-04								300	NA	7.09E+03	NA
TOTAL XYLENES	106423**	1.67E-04								100	NA	2.63E+03	NA
VINYL CHLORIDE	75014	2.18E-04								100	7.8E-05	2.01E+03	7.20E+00

All RELs are chronic values from CalEPA/OEHHA (<http://www.oehha.ca.gov/air/allrels.html>) or VLOOKUP table of 'HERD_Soil_Gas_Screening_Model_2009rev.

All IURs are from CalEPA/OEHHA (http://www.oehha.ca.gov/air/hot_spots/pdf/CPFs042909.pdf) or VLOOKUP table of 'HERD_Soil_Gas_Screening_Model_2009rev.

NA: Compound is non-carcinogenic.

* Compound not detected in any of the 5-foot soil gas samples; compound only detected in one or more 10-foot soil gas samples.

** p-Xylene used as transport surrogate for m,p-Xylene

Table VI
ATTENUATION FACTORS (α VALUES) AND CALCULATION OF SOIL GAS RBCs FOR VOCs DETECTED IN SOIL GAS (10-FT SAMPLE DEPTH)
DEFAULT INDOOR WORKER - DEFAULT INDUSTRIAL BUILDING (WITH ENGINEERED FILL)
(Based on B231-10 Site-Specific Soil Physical Parameters and 10-Ft Sample Depth)
Former CENCO Refinery
Santa Fe Springs, CA

COPC	CAS No.	α ($\mu\text{g}/\text{m}^3 / \mu\text{g}/\text{m}^3$; unitless)	THQ (-)	ILCR (-)	AT _{NC} (hrs)	AT _C (hrs)	EF (days/yr)	ED (yr)	ET (hrs/day)	REL ($\mu\text{g}/\text{m}^3$)	IUR ($\mu\text{g}/\text{m}^3$) ⁻¹	RBC _{HI} ($\mu\text{g}/\text{L}$)	RBC _{ILCR} ($\mu\text{g}/\text{L}$)
1,1-DICHLOROETHENE*	75354	4.36E-05	1	1E-05	219000	613200	250	25	8	70	NA	7.04E+03	NA
1,2,4-TRIMETHYLBENZENE	95636	2.98E-05								7	NA	1.03E+03	NA
1,3,5-TRIMETHYLBENZENE	108678	2.97E-05								6	NA	8.86E+02	NA
BENZENE	71432	4.28E-05								60	2.9E-05	6.14E+03	9.88E+01
CHLOROFORM*	67663	5.03E-05								300	5.3E-06	2.61E+04	4.60E+02
ETHYLBENZENE	100414	3.66E-05								2000	2.5E-06	2.39E+05	1.34E+03
ISOPROPYLBENZENE*	98828	3.18E-05								400	NA	5.51E+04	NA
METHYLENE CHLORIDE*	75092	4.93E-05								400	1.0E-06	3.55E+04	2.49E+03
N-PROPYLBENZENE	103651	2.95E-05								140	NA	2.08E+04	NA
TETRACHLOROETHENE	127184	3.51E-05								35	5.9E-06	4.37E+03	5.92E+02
TOLUENE	108883	4.23E-05								300	NA	3.11E+04	NA
TOTAL XYLENES	106423**	3.75E-05								100	NA	1.17E+04	NA
VINYL CHLORIDE*	75014	5.10E-05								100	7.8E-05	8.59E+03	3.08E+01

All RELs are chronic values from CalEPA/OEHHA (<http://www.oehha.ca.gov/air/allrels.html>) or VLOOKUP table of 'HERD_Soil_Gas_Screening_Model_2009rev.

All IURs are from CalEPA/OEHHA (http://www.oehha.ca.gov/air/hot_spots/pdf/CPFs042909.pdf) or VLOOKUP table of 'HERD_Soil_Gas_Screening_Model_2009rev.

NA: Compound is non-carcinogenic.

* Compound not detected in any of the 10-foot soil gas samples; compound only detected in one or more 5-foot soil gas sample.

** p-Xylene used as transport surrogate for m,p-Xylene

Table VII
SOIL GAS SAMPLE RESULTS ('DETECTS' and 'NON-DETECTS')
5-Foot Soil Gas Samples
Former CENCO Refinery
Santa Fe Springs, CA

Number	Sample ID	At least one VOC detected?
1	OS-V001-A (CONF)	Yes - HI and ILCR calculated
2	OS-V010-A (CONF)	Yes - HI and ILCR calculated
3	OS-V012-A	Yes - HI and ILCR calculated
4	OS-V012-A (DUP)	Yes - HI and ILCR calculated
5	OS-V016-A (CONF)	Yes - HI and ILCR calculated
6	OS-V020-A	Yes - HI and ILCR calculated
7	OS-V021-A	Yes - HI and ILCR calculated
8	OS-V021-A (DUP)	Yes - HI and ILCR calculated
9	OS-V022-A (CONF)	Yes - HI and ILCR calculated
10	OS-V028-A	Yes - HI and ILCR calculated
11	OS-V033-A	Yes - HI and ILCR calculated
12	OS-V034-A	Yes - HI and ILCR calculated
13	OS-V036-A	Yes - HI and ILCR calculated
14	OS-V037-A	Yes - HI and ILCR calculated
15	OS-V001-A	No - HI and ILCR NOT calculated
16	OS-V002-A	No - HI and ILCR NOT calculated
17	OS-V003-A	No - HI and ILCR NOT calculated
18	OS-V004-A	No - HI and ILCR NOT calculated
19	OS-V005-A	No - HI and ILCR NOT calculated
20	OS-V006-A	No - HI and ILCR NOT calculated
21	OS-V007-A	No - HI and ILCR NOT calculated
22	OS-V008-A	No - HI and ILCR NOT calculated
23	OS-V009-A	No - HI and ILCR NOT calculated
24	OS-V010-A	No - HI and ILCR NOT calculated
25	OS-V011-A	No - HI and ILCR NOT calculated
26	OS-V016-A	No - HI and ILCR NOT calculated
27	OS-V017-A	No - HI and ILCR NOT calculated
28	OS-V018-A	No - HI and ILCR NOT calculated
29	OS-V019-A	No - HI and ILCR NOT calculated
30	OS-V022-A	No - HI and ILCR NOT calculated
31	OS-V023-A	No - HI and ILCR NOT calculated
32	OS-V024-A	No - HI and ILCR NOT calculated
33	OS-V027-A	No - HI and ILCR NOT calculated
34	OS-V030-A	No - HI and ILCR NOT calculated
35	OS-V031-A	No - HI and ILCR NOT calculated
36	OS-V032-A	No - HI and ILCR NOT calculated
37	OS-V035-A	No - HI and ILCR NOT calculated
38	OS-V038-A	No - HI and ILCR NOT calculated
39	OS-V039-A	No - HI and ILCR NOT calculated
40	OS-V040-A	No - HI and ILCR NOT calculated
41	OS-V041-A	No - HI and ILCR NOT calculated
42	OS-V042-A	No - HI and ILCR NOT calculated
43	OS-V043-A	No - HI and ILCR NOT calculated
44	OS-V044-A	No - HI and ILCR NOT calculated
45	OS-V045-A	No - HI and ILCR NOT calculated
46	OS-V046-A	No - HI and ILCR NOT calculated
47	OS-V047-A	No - HI and ILCR NOT calculated
48	OS-V048-A	No - HI and ILCR NOT calculated
49	OS-V049-A	No - HI and ILCR NOT calculated

Table VIII
**CALCULATION OF SAMPLE-SPECIFIC HAZARD QUOTIENTS (HQs), HAZARD INDICES (HIs), AND INCREMENTAL LIFETIME
CANTER RISKS (ILCRs) FOR "VOC VAPOR INHALATION IN INDOOR AIR" EXPOSURE PATHWAY**
Soil Gas RBCs for VOCs Detected in Soil Gas (5-Foot Sample Depth)
Default Indoor Worker - Default Industrial Building (with Engineered Fill)
(based on B231-5 site specific soil physical parameters and 5-foot sample depth)
Former CENCO Refinery
Santa Fe Springs, CA

SOIL GAS CONCENTRATIONS (ug/L) - by EPA Method 8260B (except 'CONF' samples, which are by EPA Method TO-15)												
Sample ID	Tetrachloroethene	1,1-Dichloroethene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Vinyl Chloride	Benzene	Toluene	Ethylbenzene	Xylenes	Isopropylbenzene	Methylene Chloride	
OS-V001-A (CONF)	-	-	-	0.007	-	0.0044	0.0056	-	0.0099	NA	-	-
OS-V010-A (CONF)	0.0075	-	-	0.012	-	0.0034	0.0081	0.0044	0.0219	NA	-	-
OS-V012-A	-	1.0	-	-	0.21	1.4	-	-	-	-	-	-
OS-V012-A (DUP)	-	1.0	-	-	0.23	1.4	-	-	-	-	-	-
OS-V016-A (CONF)	0.011	-	0.0062	0.036	-	0.095	0.14	0.021	0.103	NA	0.0036	-
OS-V020-A	-	-	-	-	-	0.33	-	-	-	-	-	-
OS-V021-A	-	-	-	-	-	0.14	-	-	-	-	-	-
OS-V021-A (DUP)	-	-	-	-	-	0.12	-	-	-	-	-	-
OS-V022-A (CONF)	-	-	0.01	0.04	-	0.056	0.27	0.038	0.176	NA	-	-
OS-V028-A	-	-	-	-	-	-	-	-	-	1.0	-	-
OS-V033-A	-	-	-	-	-	5.1	-	-	-	-	-	-
OS-V034-A	-	-	-	-	-	3.6	-	-	-	-	-	-
OS-V036-A	-	-	-	-	-	0.16	-	-	-	-	-	-
OS-V037-A	-	-	-	-	-	0.58	-	-	-	-	-	-

HQ and HI Calculations

RBC _{HI} (ug/L)	9.74E+02	1.61E+03	1.95E+02	2.27E+02	2.01E+03	1.40E+03	7.09E+03	5.37E+04	2.63E+03	1.22E+04	8.34E+03	
	HQ (-)											ΣHQ = HI (-)
OS-V001-A (CONF)	-	-	-	3E-05	-	3E-06	8E-07	-	4E-06	-	-	4E-05
OS-V010-A (CONF)	8E-06	-	-	5E-05	-	2E-06	1E-06	8E-08	8E-06	-	-	7E-05
OS-V012-A	-	6E-04	-	-	1E-04	1E-03	-	-	-	-	-	2E-03
OS-V012-A (DUP)	-	6E-04	-	-	1E-04	1E-03	-	-	-	-	-	2E-03
OS-V016-A (CONF)	1E-05	-	3E-05	2E-04	-	7E-05	2E-05	4E-07	4E-05	-	4E-07	3E-04
OS-V020-A	-	-	-	-	-	2E-04	-	-	-	-	-	2E-04
OS-V021-A	-	-	-	-	-	1E-04	-	-	-	-	-	1E-04
OS-V021-A (DUP)	-	-	-	-	-	9E-05	-	-	-	-	-	9E-05
OS-V022-A (CONF)	-	-	5E-05	2E-04	-	4E-05	4E-05	7E-07	7E-05	-	-	4E-04
OS-V028-A	-	-	-	-	-	-	-	-	-	8E-05	-	8E-05
OS-V033-A	-	-	-	-	-	4E-03	-	-	-	-	-	4E-03
OS-V034-A	-	-	-	-	-	3E-03	-	-	-	-	-	3E-03
OS-V036-A	-	-	-	-	-	1E-04	-	-	-	-	-	1E-04
OS-V037-A	-	-	-	-	-	4E-04	-	-	-	-	-	4E-04

ILCR Calculations

RBC _{ILCR} (ug/L)	1.32E+02	NA	NA	NA	7.20E+00	2.26E+01	NA	3.01E+02	NA	NA	5.84E+02	
	ILCR _{COPC}											ILCR _{COPC} = ILCR (-)
OS-V001-A (CONF)	-	-	-	-	-	2E-09	-	-	-	-	-	2E-09
OS-V010-A (CONF)	6E-10	-	-	-	-	2E-09	-	1E-10	-	-	-	2E-09
OS-V012-A	-	-	-	-	3E-07	6E-07	-	-	-	-	-	9E-07
OS-V012-A (DUP)	-	-	-	-	3E-07	6E-07	-	-	-	-	-	9E-07
OS-V016-A (CONF)	8E-10	-	-	-	-	4E-08	-	7E-10	-	-	6E-11	4E-08
OS-V020-A	-	-	-	-	-	1E-07	-	-	-	-	-	1E-07
OS-V021-A	-	-	-	-	-	6E-08	-	-	-	-	-	6E-08
OS-V021-A (DUP)	-	-	-	-	-	5E-08	-	-	-	-	-	5E-08
OS-V022-A (CONF)	-	-	-	-	-	2E-08	-	1E-09	-	-	-	3E-08
OS-V028-A	-	-	-	-	-	-	-	-	-	-	-	0E+00
OS-V033-A	-	-	-	-	-	2E-06	-	-	-	-	-	2E-06
OS-V034-A	-	-	-	-	-	2E-06	-	-	-	-	-	2E-06
OS-V036-A	-	-	-	-	-	7E-08	-	-	-	-	-	7E-08
OS-V037-A	-	-	-	-	-	3E-07	-	-	-	-	-	3E-07

NA - Information not available

"-": Not Detected

(DUP) - duplicate sample

(CONF) - confirmation sample; analyzed by EPA Method TO-15

Table IX
Soil Gas Sample Results ('Detects' and 'Non-Detects')
10-Foot Soil Gas Samples
Former CENCO Refinery
Santa Fe Springs, CA

Number	Sample ID	At least one VOC detected?
1	OS-V042-B	Yes - HI and ILCR calculated
2	OS-V016-B	Yes - HI and ILCR calculated
3	OS-V020-B	Yes - HI and ILCR calculated
4	OS-V021-B	Yes - HI and ILCR calculated
5	OS-V026-B	Yes - HI and ILCR calculated
6	OS-V029-B	Yes - HI and ILCR calculated
7	OS-V032-B	Yes - HI and ILCR calculated
8	OS-V032-B (DUP)	Yes - HI and ILCR calculated
9	OS-V033-B	Yes - HI and ILCR calculated
10	OS-V033-B (CONF)	Yes - HI and ILCR calculated
11	OS-V034-B	Yes - HI and ILCR calculated
12	OS-V034-B	Yes - HI and ILCR calculated
13	OS-V036-B	Yes - HI and ILCR calculated
14	OS-V037-B	Yes - HI and ILCR calculated
15	OS-V046-B	Yes - HI and ILCR calculated
16	OS-V046-B (DUP)	Yes - HI and ILCR calculated
17	OS-V040-B (1PV)	No - HI and ILCR <u>NOT</u> calculated
18	OS-V001-B (1PV)	No - HI and ILCR <u>NOT</u> calculated
19	OS-V001-B (3PV)	No - HI and ILCR <u>NOT</u> calculated
20	OS-V001-B (7PV)	No - HI and ILCR <u>NOT</u> calculated
21	OS-V002-B	No - HI and ILCR <u>NOT</u> calculated
22	OS-V003-B	No - HI and ILCR <u>NOT</u> calculated
23	OS-V004-B	No - HI and ILCR <u>NOT</u> calculated
24	OS-V005-B	No - HI and ILCR <u>NOT</u> calculated
25	OS-V006-B	No - HI and ILCR <u>NOT</u> calculated
26	OS-V007-B	No - HI and ILCR <u>NOT</u> calculated
27	OS-V007-B (DUP)	No - HI and ILCR <u>NOT</u> calculated
28	OS-V008-B	No - HI and ILCR <u>NOT</u> calculated
29	OS-V009-B	No - HI and ILCR <u>NOT</u> calculated
30	OS-V010-B	No - HI and ILCR <u>NOT</u> calculated
31	OS-V017-B	No - HI and ILCR <u>NOT</u> calculated
32	OS-V018-B	No - HI and ILCR <u>NOT</u> calculated
33	OS-V022-B	No - HI and ILCR <u>NOT</u> calculated
34	OS-V022-B (DUP)	No - HI and ILCR <u>NOT</u> calculated
35	OS-V023-B	No - HI and ILCR <u>NOT</u> calculated
36	OS-V027-B	No - HI and ILCR <u>NOT</u> calculated
37	OS-V028-B	No - HI and ILCR <u>NOT</u> calculated
38	OS-V028-B (DUP)	No - HI and ILCR <u>NOT</u> calculated
39	OS-V030-B	No - HI and ILCR <u>NOT</u> calculated
40	OS-V030-B (DUP)	No - HI and ILCR <u>NOT</u> calculated
41	OS-V031-B	No - HI and ILCR <u>NOT</u> calculated
42	OS-V035-B	No - HI and ILCR <u>NOT</u> calculated
43	OS-V038-B	No - HI and ILCR <u>NOT</u> calculated
44	OS-V039-B	No - HI and ILCR <u>NOT</u> calculated
45	OS-V040-B (3PV)	No - HI and ILCR <u>NOT</u> calculated
46	OS-V040-B (7PV)	No - HI and ILCR <u>NOT</u> calculated
47	OS-V041-B	No - HI and ILCR <u>NOT</u> calculated
48	OS-V042-B (CONF)	No - HI and ILCR <u>NOT</u> calculated
49	OS-V042-B (DUP)	No - HI and ILCR <u>NOT</u> calculated
50	OS-V043-B	No - HI and ILCR <u>NOT</u> calculated
51	OS-V044-B	No - HI and ILCR <u>NOT</u> calculated
52	OS-V045-B	No - HI and ILCR <u>NOT</u> calculated
53	OS-V047-B	No - HI and ILCR <u>NOT</u> calculated
54	OS-V048-B	No - HI and ILCR <u>NOT</u> calculated
55	OS-V049-B	No - HI and ILCR <u>NOT</u> calculated

Table X
CALCULATION OF SAMPLE-SPECIFIC HAZARD QUOTIENTS (HQs), HAZARD INDICES (HI), AND INCREMENTAL LIFETIME
CANCER RISKS (ILCRs) FOR "VOC VAPOR INHALATION IN INDOOR AIR" EXPOSURE PATHWAY
Soil Gas RBCs for VOCs Detected in Soil Gas (10-Foot Sample Depth)
Default Indoor Worker - Default Industrial Building (with Engineered Fill)
(based on B231-10 site specific soil physical parameters and 10-foot sample depth)
Former CENCO Refinery
Santa Fe Springs, CA

SOIL GAS CONCENTRATIONS (ug/L) - by EPA Method 8260B (except 'CONF' samples, which are by EPA Method TO-15)									
Sample ID	Tetrachloroethene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Benzene	Toluene	Ethylbenzene	Xylenes	n-Propylbenzene	Chloroform
OS-V016-B	-	-	-	0.100	-	-	-	-	-
OS-V020-B	-	-	-	0.11	-	-	-	-	-
OS-V021-B	-	-	-	0.12	-	-	-	-	-
OS-V026-B	0.13	-	-	-	-	-	-	-	-
OS-V029-B	-	40	98	770	2000	260	1200	27	-
OS-V032-B	0.61	-	-	-	-	-	-	-	-
OS-V032-B (DUP)	0.53	-	-	-	-	-	-	-	-
OS-V033-B	-	-	-	88	-	-	-	-	-
OS-V033-B (CONF)	-	-	-	200	7.6	-	-	NA	-
OS-V034-B	-	-	-	40	-	-	-	-	-
OS-V034-B	-	-	-	49	-	-	-	-	-
OS-V036-B	-	-	-	4.8	-	-	-	-	-
OS-V037-B	-	-	-	31	-	-	-	-	-
OS-V042-B	-	-	-	-	-	-	-	-	0.59
OS-V046-B	-	-	-	-	-	-	-	-	0.19
OS-V046-B (DUP)	-	-	-	-	-	-	-	-	0.17

HQ and HI Calculations

RBC _{HI} (ug/L)	4.37E+03	8.86E+02	1.03E+03	6.14E+03	3.11E+04	2.39E+05	1.17E+04	2.08E+04	2.61E+04
HQ (-)									
OS-V016-B	-	-	-	2E-05	-	-	-	-	-
OS-V020-B	-	-	-	2E-05	-	-	-	-	-
OS-V021-B	-	-	-	2E-05	-	-	-	-	-
OS-V026-B	3E-05	-	-	-	-	-	-	-	3E-05
OS-V029-B	-	5E-02	1E-01	1E-01	6E-02	1E-03	1E-01	1E-03	4E-01
OS-V032-B	1E-04	-	-	-	-	-	-	-	1E-04
OS-V032-B (DUP)	1E-04	-	-	-	-	-	-	-	1E-04
OS-V033-B	-	-	-	1E-02	-	-	-	-	1E-02
OS-V033-B (CONF)	-	-	-	3E-02	2E-04	-	-	-	3E-02
OS-V034-B	-	-	-	7E-03	-	-	-	-	7E-03
OS-V034-B	-	-	-	8E-03	-	-	-	-	8E-03
OS-V036-B	-	-	-	8E-04	-	-	-	-	8E-04
OS-V037-B	-	-	-	5E-03	-	-	-	-	5E-03
OS-V042-B	-	-	-	-	-	-	-	2E-05	2E-05
OS-V046-B	-	-	-	-	-	-	-	7E-06	7E-06
OS-V046-B (DUP)	-	-	-	-	-	-	-	7E-06	7E-06

ILCR Calculations

RBC _{ILCR} (ug/L)	5.92E+02	NA	NA	9.88E+01	NA	1.34E+03	NA	NA	4.60E+02
ILCR _{COPC}									
OS-V016-B	-	-	-	1E-08	-	-	-	-	1E-08
OS-V020-B	-	-	-	1E-08	-	-	-	-	1E-08
OS-V021-B	-	-	-	1E-08	-	-	-	-	1E-08
OS-V026-B	2E-09	-	-	-	-	-	-	-	2E-09
OS-V029-B	-	-	-	8E-05	-	2E-06	-	-	8E-05
OS-V032-B	1E-08	-	-	-	-	-	-	-	1E-08
OS-V032-B (DUP)	9E-09	-	-	-	-	-	-	-	9E-09
OS-V033-B	-	-	-	9E-06	-	-	-	-	9E-06
OS-V033-B (CONF)	-	-	-	2E-05	-	-	-	-	2E-05
OS-V034-B	-	-	-	4E-06	-	-	-	-	4E-06
OS-V034-B	-	-	-	5E-06	-	-	-	-	5E-06
OS-V036-B	-	-	-	5E-07	-	-	-	-	5E-07
OS-V037-B	-	-	-	3E-06	-	-	-	-	3E-06
OS-V042-B	-	-	-	-	-	-	-	1E-08	1E-08
OS-V046-B	-	-	-	-	-	-	-	4E-09	4E-09
OS-V046-B (DUP)	-	-	-	-	-	-	-	4E-09	4E-09

NA - Information not available

"-": Not Detected

(DUP) - duplicate sample

(CONF) - confirmation sample; analyzed by EPA Method TO-15

Appendix A



California Regional Water Quality Control Board Los Angeles Region

320 West Fourth Street, Suite 200, Los Angeles, California 90013
(213) 576-6600 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles>



Linda S. Adams
Acting Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

April 13, 2011

Mr. Mike Barranco
Lakeland Development Company
12345 Lakeland Road
Santa Fe Springs, California 90670

**SUBJECT: APPROVAL OF WORK PLAN FOR OFF-SITE SOIL GAS SURVEY,
PURSUANT TO CALIFORNIA WATER CODE SECTION 13304 CLEANUP
AND ABATEMENT ORDER NO. 97-118**

**SITE: FORMER POWERINE / CENCO REFINERY, 12345 LAKELAND ROAD,
SANTA FE SPRINGS, CALIFORNIA, (SCP NO. 0318A, SITE ID NO. 2040071)**

Dear Mr. Barranco:

Regional Board staff have received and reviewed the *Addendum to the Revised Off-Site Soil Gas Survey Workplan* (Work Plan) for the Site. The Work Plan was prepared and submitted on your behalf by Murex Environmental, and was received by the Regional Board on September 3, 2010. Appendix A of the Work Plan is *The Revised Off-Site Soil Gas Survey Workplan* (dated August 14, 2007) which could not be implemented due to funding constraints that have since been resolved. The Work Plan was submitted in response to the Regional Board's July 20, 2010 directive letter pursuant to California Water Code (CWC) section 13304 Cleanup and Abatement Order No. 97-118.

An oil refinery was operated at the Site from the 1930's until 1995 and the surrounding properties are currently used for commercial and industrial purposes. The refinery operations resulted in impact to the subsurface; primarily with petroleum hydrocarbons. The Work Plan proposes to collect soil vapor samples at 5- and 10-foot depths at 28 locations west, and 21 locations south, of the former refinery. The purpose of this work is to determine if volatile organic compound (VOC) impacts in soil vapor beneath the former refinery extend off-site to the west and south. The Work Plan is hereby approved as proposed.

Prior to the commencement of any field work, you must develop a site-specific Health and Safety Plan (H&SP) in accordance with section 5192 of the California Code of Regulations (CCR), title 8 and submit to the Regional Board project staff. The jurisdictional agency, California Occupational Safety and Health Administration (Cal-OSHA), may inspect the field activities.

Pursuant to section 13304 of the CWC and Order No. 97-118, you are required to submit a technical report of the soil gas survey results, to the Regional Board by **July 15, 2011**, for our review and approval. The new due date is an amendment to the existing Cleanup and Abatement Order No. 97-118, issued August 26, 1997.

California Environmental Protection Agency

Mr. Mike Barranco
Lakeland Development Company

- 2 -

April 13, 2011

The Regional Board requires you to include a perjury statement in all work plans and reports submitted under Cleanup and Abatement Orders. The perjury statement shall be signed by a senior authorized representative at your company (and not by a consultant). The statement shall be in the following format:


"I [NAME], do hereby declare, under penalty of perjury under the laws of the State of California, that I am [JOB TITLE] for [NAME OF RESPONSIBLE PARTY/DISCHARGER], that I am authorized to attest to the veracity of the information contained in the report(s) described herein, and that the information contained in [NAME AND DATE OF REPORT] is true and correct, and that this declaration was executed at [PLACE], [STATE], on [DATE]."

The State Water Resources Control Board (State Water Board) adopted regulations requiring the electronic submittals of information over the internet using the State Water Board GeoTracker data management system. You are required not only to submit hard copy reports required in this Order, but also to comply by uploading all reports and correspondence prepared to date on to the GeoTracker data management system. The text of the regulations can be found at the URL: http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/esi_regs.shtml.

Pursuant to section 13350 of the CWC, failure to submit the required technical report by **July 15, 2011**, or failure to comply with provisions of Cleanup and Abatement Order No. 97-118, may result in civil liability penalties administratively imposed by the Regional Board in an amount up to five thousand dollars (\$5,000) for each day the technical report is not received and without further warning.

Should you have any questions related to this project, please telephone Don Indermill, of my staff, at (213) 576-6811, or email him at dindermill@waterboards.ca.gov.

Sincerely,

for 
Samuel Unger, P.E.
Executive Officer

cc: Jeremy Squire, Murex Environmental
Jeff Hawkins, Isola Law Group
Steve Hariri, DTSC, Cypress



California Regional Water Quality Control Board Los Angeles Region

320 West Fourth Street, Suite 200, Los Angeles, California 90013

(213) 576-6600 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles>



Matthew Rodriguez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

August 30, 2011

Mr. Mike Barranco
Lakeland Development Company
12345 Lakeland Road
Santa Fe Springs, California 90670

SUBJECT: APPROVAL OF TIME EXTENSION FOR SUMMITAL OF REPORT OF SOIL GAS SURVEY PURSUANT TO CALIFORNIA WATER CODE SECTION 13304 CLEANUP AND ABATEMENT ORDER NO. 97-118

SITE: FORMER POWERINE / CENCO REFINERY, 12345 LAKELAND ROAD, SANTA FE SPRINGS, CALIFORNIA, (SCP NO. 0318A, SITE ID NO. 2040071)

Dear Mr. Barranco:

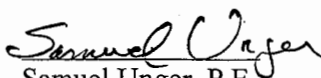
Regional Board staff has reviewed the time extension request, dated August 10, 2011, submitted by you for the above-referenced site. The letter requests a due date extension for the submittal of the Report of Soil Gas Survey (Report). The initial due date for submitting the Report as required in the Regional Board's Work Plan Approval Letter, dated April 13, 2011, was July 15, 2011. A subsequent letter from the Regional Board extended the due date to August 15, 2011. Your letter explains that all the proposed soil gas sampling has been done except for locations on two off-site properties. The Regional Board sent the owners of the two properties letters requesting access and you recently negotiated access arrangements with them.

The reason for the requested time extension is that your consultant has been further delayed in getting access to the two remaining properties and additional time is now required to perform the work and finalize the Report for submission to the Regional Board. After reviewing your request and file documents for this site, Regional Board staff hereby grants this extension from August 15, 2011 to **November 15, 2011** to submit the Report. The due date extension is an amendment to the Work Plan Approval Letter issued by this Regional Board on April 13, 2011 (under existing Cleanup and Abatement Order 97-118 per California Water Code (CWC) section 13304).

Pursuant to section 13350 of the CWC, failure to submit the required technical report by the specified due date may result in the imposition of civil liability penalties by the Regional Board, without further warning, of up to five-thousand dollars (\$5,000) per day for each day the technical report is not received after the above due date.

If you have any questions, please contact my staff, Mr. Don Indermill, at (213) 576-6811 or dindermill@waterboards.ca.gov.

Sincerely,


Samuel Unger, P.E.
Executive Officer

California Environmental Protection Agency



Recycled Paper

Appendix B



Mobile
Geochemistry
Inc.

Mr. Jeremy Squire
Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

15 July 2011



H&P Project: MX062711-SB2
Client Project: 1003-001-200 / Fmr CENCO Refinery

Dear Mr. Jeremy Squire:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 6/27/2011 -7/1/2011 which were analyzed in accordance with the attached Chain of Custody record(s).

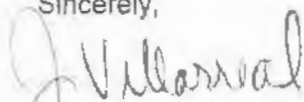
The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,


Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845



2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-V040-B, 1PV, P116cc	E106077-01	Vapor	27-Jun-11	27-Jun-11
OS-V040-B, 3PV, P348cc	E106077-02	Vapor	27-Jun-11	27-Jun-11
OS-V040-B, 7PV, P812cc	E106077-03	Vapor	27-Jun-11	27-Jun-11
OS-V040-A, P333cc	E106077-04	Vapor	27-Jun-11	27-Jun-11
OS-V043-A, P336cc	E106077-05	Vapor	27-Jun-11	27-Jun-11
OS-V043-B, P348cc	E106077-06	Vapor	27-Jun-11	27-Jun-11
OS-V044-A, P333cc	E106077-07	Vapor	27-Jun-11	27-Jun-11
OS-V044-B, P348cc	E106077-08	Vapor	27-Jun-11	27-Jun-11
OS-V049-B, P348cc	E106077-09	Vapor	27-Jun-11	27-Jun-11
OS-V048-A, P333cc	E106077-10	Vapor	27-Jun-11	27-Jun-11
OS-V048-B, P348cc	E106077-11	Vapor	27-Jun-11	27-Jun-11
OS-V049-A, P333cc	E106077-12	Vapor	27-Jun-11	27-Jun-11
OS-V042-A, P333cc	E106077-13	Vapor	27-Jun-11	27-Jun-11
OS-V042-B, P348cc	E106077-14	Vapor	27-Jun-11	27-Jun-11
OS-V042-B Dup, P398cc	E106077-15	Vapor	27-Jun-11	27-Jun-11
OS-V047-A, P333cc	E106084-01	Vapor	28-Jun-11	28-Jun-11
OS-V047-B, P348cc	E106084-02	Vapor	28-Jun-11	28-Jun-11
OS-V046-A, P333cc	E106084-03	Vapor	28-Jun-11	28-Jun-11
OS-V046-B, P348cc	E106084-04	Vapor	28-Jun-11	28-Jun-11
OS-V046-B Dup, P398cc	E106084-05	Vapor	28-Jun-11	28-Jun-11
OS-V045-A, P333cc	E106084-06	Vapor	28-Jun-11	28-Jun-11
OS-V045-B, P348cc	E106084-07	Vapor	28-Jun-11	28-Jun-11
OS-V039-A, P333cc	E106084-08	Vapor	28-Jun-11	28-Jun-11
OS-V039-B, P348cc	E106084-09	Vapor	28-Jun-11	28-Jun-11
OS-V041-A, P333cc	E106084-10	Vapor	28-Jun-11	28-Jun-11
OS-V041-B, P348cc	E106084-11	Vapor	28-Jun-11	28-Jun-11
OS-V035-A, P333cc	E106084-12	Vapor	28-Jun-11	28-Jun-11
OS-V035-B, P348cc	E106084-13	Vapor	28-Jun-11	28-Jun-11



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-V037-A, P333cc	E106084-14	Vapor	28-Jun-11	28-Jun-11
OS-V037-B, P348cc	E106084-15	Vapor	28-Jun-11	28-Jun-11
OS-V036-A, P333cc	E106084-16	Vapor	28-Jun-11	28-Jun-11
OS-V036-B, P348cc	E106084-17	Vapor	28-Jun-11	28-Jun-11
OS-V038-A, P333cc	E106089-01	Vapor	29-Jun-11	29-Jun-11
OS-V038-B, P348cc	E106089-02	Vapor	29-Jun-11	29-Jun-11
OS-V034-A, P333cc	E106089-03	Vapor	29-Jun-11	29-Jun-11
OS-V034-B, P348cc	E106089-04	Vapor	29-Jun-11	29-Jun-11
OS-V033-A, P333cc	E106089-05	Vapor	29-Jun-11	29-Jun-11
OS-V033-B, P348cc	E106089-06	Vapor	29-Jun-11	29-Jun-11
OS-V032-A, P333cc	E106089-07	Vapor	29-Jun-11	29-Jun-11
OS-V032-B, P348cc	E106089-08	Vapor	29-Jun-11	29-Jun-11
OS-V032-B Dup, P398cc	E106089-09	Vapor	29-Jun-11	29-Jun-11
OS-V034-B, P348cc	E106093-01	Vapor	30-Jun-11	30-Jun-11
OS-V031-A, P333cc	E106093-02	Vapor	30-Jun-11	30-Jun-11
OS-V031-B, P348cc	E106093-03	Vapor	30-Jun-11	30-Jun-11
OS-V001-B, 1PV, P116cc	E106093-04	Vapor	30-Jun-11	30-Jun-11
OS-V001-B, 3PV, P348cc	E106093-05	Vapor	30-Jun-11	30-Jun-11
OS-V001-B, 7PV, P812cc	E106093-06	Vapor	30-Jun-11	30-Jun-11
OS-V019-A, P99cc	E106093-07	Vapor	30-Jun-11	30-Jun-11
OS-V011-A, P99cc	E106093-08	Vapor	30-Jun-11	30-Jun-11
OS-V012-A, P333cc	E106093-09	Vapor	30-Jun-11	30-Jun-11
OS-V012-A Dup, P383cc	E106093-10	Vapor	30-Jun-11	30-Jun-11
OS-V021-B, PV348cc	E107002-01	Vapor	01-Jul-11	01-Jul-11
OS-V021-A, PV333cc	E107002-02	Vapor	01-Jul-11	01-Jul-11
OS-V021-A-Dup, PV383cc	E107002-03	Vapor	01-Jul-11	01-Jul-11
OS-V020-B, PV348cc	E107002-04	Vapor	01-Jul-11	01-Jul-11
OS-V029-B, PV348cc	E107002-05	Vapor	01-Jul-11	01-Jul-11



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-V001-A, PV333cc	E107002-06	Vapor	01-Jul-11	01-Jul-11

The TPH gasoline results reported for the samples collected and analyzed on June 27, 28, 29 and 30, 2011, are estimated. Since TPH was requested following the analysis of the samples, a TPH gas standard was not analyzed.



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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-B, 1PV, P116cc (E106077-01) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-B, 1PV, P116cc (E106077-01) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		97.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		101 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-B, 3PV, P348cc (E106077-02) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-B, 3PV, P348cc (E106077-02) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		83.0 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		85.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-B, 7PV, P812cc (E106077-03) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-B, 7PV, P812cc (E106077-03) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		99.0 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-A, P333cc (E106077-04) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-A, P333cc (E106077-04) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		102 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		101 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V043-A, P336cc (E106077-05) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V043-A, P336cc (E106077-05) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		100 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		104 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	75-125		"	"	"	"	



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2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V043-B, P348cc (E106077-06) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V043-B, P348cc (E106077-06) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>									
		104 %	75-125		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>									
		108 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>									
		100 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V044-A, P333cc (E106077-07) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V044-A, P333cc (E106077-07) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		105 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V044-B, P348cc (E106077-08) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V044-B, P348cc (E106077-08) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		103 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		102 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V049-B, P348cc (E106077-09) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V049-B, P348cc (E106077-09) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		101 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		101 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V048-A, P333cc (E106077-10) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V048-A, P333cc (E106077-10) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		102 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		99.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V048-B, P348cc (E106077-11) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V048-B, P348cc (E106077-11) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		107 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V049-A, P333cc (E106077-12) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V049-A, P333cc (E106077-12) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		108 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-A, P333cc (E106077-13) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.1	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.08	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	1.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	0.20	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.16	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.20	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	2.0	"	"	"	"	"	"	
Benzene	ND	0.20	"	"	"	"	"	"	
Trichloroethene	ND	0.20	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.20	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.20	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-A, P333cc (E106077-13) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	1.0	ug/l	0.1	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	0.20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		94.1 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		89.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-B, P348cc (E106077-14) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	0.59	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-B, P348cc (E106077-14) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	2.0	ug/l	0.2	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		97.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-B Dup, P398cc (E106077-15) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-B Dup, P398cc (E106077-15) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Ethylbenzene	ND	2.0	ug/l	0.2	EF12701	27-Jun-11	27-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		96.6 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		87.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V047-A, P333cc (E106084-01) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V047-A, P333cc (E106084-01) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		107 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		99.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V047-B, P348cc (E106084-02) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V047-B, P348cc (E106084-02) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		102 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.3 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V046-A, P333cc (E106084-03) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V046-A, P333cc (E106084-03) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		93.4 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		89.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V046-B, P348cc (E106084-04) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	0.19	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V046-B, P348cc (E106084-04) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		97.6 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		78.8 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.3 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V046-B Dup, P398cc (E106084-05) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	0.17	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V046-B Dup, P398cc (E106084-05) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		96.7 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		77.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V045-A, P333cc (E106084-06) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V045-A, P333cc (E106084-06) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		95.7 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		76.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V045-B, P348cc (E106084-07) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V045-B, P348cc (E106084-07) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		97.3 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		78.3 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V039-A, P333cc (E106084-08) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V039-A, P333cc (E106084-08) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		98.0 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		77.8 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V039-B, P348cc (E106084-09) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V039-B, P348cc (E106084-09) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		101 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		80.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V041-A, P333cc (E106084-10) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V041-A, P333cc (E106084-10) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
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Surrogate: Dibromofluoromethane		96.8 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		77.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V041-B, P348cc (E106084-11) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V041-B, P348cc (E106084-11) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		99.2 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		80.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V035-A, P333cc (E106084-12) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V035-A, P333cc (E106084-12) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
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Surrogate: Dibromofluoromethane		98.1 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		79.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		115 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V035-B, P348cc (E106084-13) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V035-B, P348cc (E106084-13) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		98.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		78.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V037-A, P333cc (E106084-14) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.067	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.67	"	"	"	"	"	"	
Chloromethane	ND	0.67	"	"	"	"	"	"	
Vinyl chloride	ND	0.05	"	"	"	"	"	"	
Bromomethane	ND	0.67	"	"	"	"	"	"	
Chloroethane	ND	0.67	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.67	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.67	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.67	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.67	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.67	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.67	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.3	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.67	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.3	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.67	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.67	"	"	"	"	"	"	
Chloroform	ND	0.13	"	"	"	"	"	"	
Bromochloromethane	ND	0.67	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.67	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.67	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.11	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.13	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.3	"	"	"	"	"	"	
Benzene	0.58	0.13	"	"	"	"	"	"	
Trichloroethene	ND	0.13	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.67	"	"	"	"	"	"	
Bromodichloromethane	ND	0.67	"	"	"	"	"	"	
Dibromomethane	ND	0.67	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.67	"	"	"	"	"	"	
Toluene	ND	1.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.67	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.67	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.67	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.67	"	"	"	"	"	"	
Tetrachloroethene	ND	0.13	"	"	"	"	"	"	
Dibromochloromethane	ND	0.67	"	"	"	"	"	"	
Chlorobenzene	ND	0.13	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V037-A, P333cc (E106084-14) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.67	ug/l	0.067	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.67	"	"	"	"	"	"	
m,p-Xylene	ND	0.67	"	"	"	"	"	"	
o-Xylene	ND	0.67	"	"	"	"	"	"	
Styrene	ND	0.67	"	"	"	"	"	"	
Bromoform	ND	0.67	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.67	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.67	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.67	"	"	"	"	"	"	
n-Propylbenzene	ND	0.67	"	"	"	"	"	"	
Bromobenzene	ND	0.67	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.67	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.67	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.67	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.67	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.67	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.67	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.67	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.67	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.67	"	"	"	"	"	"	
n-Butylbenzene	ND	0.67	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.67	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	6.7	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.67	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.67	"	"	"	"	"	"	
Naphthalene	ND	0.13	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.67	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.7	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

96.3 % 75-125

"

"

"

"

Surrogate: 1,2-Dichloroethane-d4

51.1 % 75-125

"

"

"

"

S-04

Surrogate: 4-Bromofluorobenzene

85.8 % 75-125

"

"

"

"



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Murex Environmental, Inc.
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Project: MX062711-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V037-B, P348cc (E106084-15) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.40	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	5.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	5.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.80	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	31	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V037-B, P348cc (E106084-15) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	5.0	ug/l	0.5	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		96.0 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		115 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.0 %	75-125		"	"	"	"	



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Project: MX062711-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V036-A, P333cc (E106084-16) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	0.16	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V036-A, P333cc (E106084-16) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		100 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		82.7 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V036-B, P348cc (E106084-17) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.67	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	6.7	"	"	"	"	"	"	
Chloromethane	ND	6.7	"	"	"	"	"	"	
Vinyl chloride	ND	0.54	"	"	"	"	"	"	
Bromomethane	ND	6.7	"	"	"	"	"	"	
Chloroethane	ND	6.7	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	6.7	"	"	"	"	"	"	
1,1-Dichloroethene	ND	6.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	6.7	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	6.7	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	6.7	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	6.7	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	13	"	"	"	"	"	"	
1,1-Dichloroethane	ND	6.7	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	13	"	"	"	"	"	"	
2,2-Dichloropropane	ND	6.7	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	6.7	"	"	"	"	"	"	
Chloroform	ND	1.3	"	"	"	"	"	"	
Bromochloromethane	ND	6.7	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	6.7	"	"	"	"	"	"	
1,1-Dichloropropene	ND	6.7	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.1	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.3	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	13	"	"	"	"	"	"	
Benzene	4.8	1.3	"	"	"	"	"	"	
Trichloroethene	ND	1.3	"	"	"	"	"	"	
1,2-Dichloropropane	ND	6.7	"	"	"	"	"	"	
Bromodichloromethane	ND	6.7	"	"	"	"	"	"	
Dibromomethane	ND	6.7	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	6.7	"	"	"	"	"	"	
Toluene	ND	13	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	6.7	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	6.7	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	6.7	"	"	"	"	"	"	
1,3-Dichloropropane	ND	6.7	"	"	"	"	"	"	
Tetrachloroethene	ND	1.3	"	"	"	"	"	"	
Dibromochloromethane	ND	6.7	"	"	"	"	"	"	
Chlorobenzene	ND	1.3	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V036-B, P348cc (E106084-17) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Ethylbenzene	ND	6.7	ug/l	0.67	EF12801	28-Jun-11	28-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	6.7	"	"	"	"	"	"	
m,p-Xylene	ND	6.7	"	"	"	"	"	"	
o-Xylene	ND	6.7	"	"	"	"	"	"	
Styrene	ND	6.7	"	"	"	"	"	"	
Bromoform	ND	6.7	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	6.7	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	6.7	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	6.7	"	"	"	"	"	"	
n-Propylbenzene	ND	6.7	"	"	"	"	"	"	
Bromobenzene	ND	6.7	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	6.7	"	"	"	"	"	"	
2-Chlorotoluene	ND	6.7	"	"	"	"	"	"	
4-Chlorotoluene	ND	6.7	"	"	"	"	"	"	
tert-Butylbenzene	ND	6.7	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	6.7	"	"	"	"	"	"	
sec-Butylbenzene	ND	6.7	"	"	"	"	"	"	
p-Isopropyltoluene	ND	6.7	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	6.7	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	6.7	"	"	"	"	"	"	
n-Butylbenzene	ND	6.7	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	6.7	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	67	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	6.7	"	"	"	"	"	"	
Hexachlorobutadiene	ND	6.7	"	"	"	"	"	"	
Naphthalene	ND	1.3	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	6.7	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	67	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>									
		90.3 %	75-125		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>									
		83.0 %	75-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>									
		56.0 %	75-125		"	"	"	"	S-04



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V038-A, P333cc (E106089-01) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V038-A, P333cc (E106089-01) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		94.1 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		95.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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Project: MX062711-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V038-B, P348cc (E106089-02) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V038-B, P348cc (E106089-02) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		95.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		99.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V034-A, P333cc (E106089-03) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	3.6	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V034-A, P333cc (E106089-03) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	2.0	ug/l	0.2	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		102 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		82.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V034-B, P348cc (E106089-04) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.40	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	5.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	5.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.80	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	40	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V034-B, P348cc (E106089-04) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	5.0	ug/l	0.5	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		97.3 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		84.5 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V033-A, P333cc (E106089-05) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.40	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	5.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	5.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.80	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	5.1	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	



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Project: MX062711-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V033-A, P333cc (E106089-05) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	5.0	ug/l	0.5	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		99.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		98.7 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V033-B, P348cc (E106089-06) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	20	ug/l	2	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	20	"	"	"	"	"	"	
Chloromethane	ND	20	"	"	"	"	"	"	
Vinyl chloride	ND	1.6	"	"	"	"	"	"	
Bromomethane	ND	20	"	"	"	"	"	"	
Chloroethane	ND	20	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	20	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	20	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	20	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	20	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	40	"	"	"	"	"	"	
2,2-Dichloropropane	ND	20	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Chloroform	ND	4.0	"	"	"	"	"	"	
Bromochloromethane	ND	20	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	20	"	"	"	"	"	"	
1,1-Dichloropropene	ND	20	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.2	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	40	"	"	"	"	"	"	
Benzene	88	4.0	"	"	"	"	"	"	
Trichloroethene	ND	4.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	20	"	"	"	"	"	"	
Bromodichloromethane	ND	20	"	"	"	"	"	"	
Dibromomethane	ND	20	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
Toluene	ND	40	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	20	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	20	"	"	"	"	"	"	
1,3-Dichloropropane	ND	20	"	"	"	"	"	"	
Tetrachloroethene	ND	4.0	"	"	"	"	"	"	
Dibromochloromethane	ND	20	"	"	"	"	"	"	
Chlorobenzene	ND	4.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V033-B, P348cc (E106089-06) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	20	ug/l	2	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
m,p-Xylene	ND	20	"	"	"	"	"	"	
o-Xylene	ND	20	"	"	"	"	"	"	
Styrene	ND	20	"	"	"	"	"	"	
Bromoform	ND	20	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	20	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	20	"	"	"	"	"	"	
n-Propylbenzene	ND	20	"	"	"	"	"	"	
Bromobenzene	ND	20	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	20	"	"	"	"	"	"	
2-Chlorotoluene	ND	20	"	"	"	"	"	"	
4-Chlorotoluene	ND	20	"	"	"	"	"	"	
tert-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	20	"	"	"	"	"	"	
sec-Butylbenzene	ND	20	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	20	"	"	"	"	"	"	
n-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	200	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	20	"	"	"	"	"	"	
Naphthalene	ND	4.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	200	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		98.6 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		106 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V032-A, P333cc (E106089-07) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V032-A, P333cc (E106089-07) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		100 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		101 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V032-B, P348cc (E106089-08) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.1	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.08	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	1.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	0.20	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.16	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.20	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	2.0	"	"	"	"	"	"	
Benzene	ND	0.20	"	"	"	"	"	"	
Trichloroethene	ND	0.20	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	0.61	0.20	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.20	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V032-B, P348cc (E106089-08) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	1.0	ug/l	0.1	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	0.20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		98.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		99.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V032-B Dup, P398cc (E106089-09) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.1	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.08	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	1.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	1.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	2.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	0.20	"	"	"	"	"	"	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.16	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.20	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	2.0	"	"	"	"	"	"	
Benzene	ND	0.20	"	"	"	"	"	"	
Trichloroethene	ND	0.20	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	0.53	0.20	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.20	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V032-B Dup, P398cc (E106089-09) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Ethylbenzene	ND	1.0	ug/l	0.1	EF12904	29-Jun-11	29-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Bromobenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	0.20	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		95.7 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		106 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V034-B, P348cc (E106093-01) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	1	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	10	"	"	"	"	"	"	
Chloromethane	ND	10	"	"	"	"	"	"	
Vinyl chloride	ND	0.80	"	"	"	"	"	"	
Bromomethane	ND	10	"	"	"	"	"	"	
Chloroethane	ND	10	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethene	ND	10	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	10	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	10	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	10	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	10	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	20	"	"	"	"	"	"	
1,1-Dichloroethane	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	20	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	10	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Bromochloromethane	ND	10	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	10	"	"	"	"	"	"	
1,1-Dichloropropene	ND	10	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.6	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	2.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	20	"	"	"	"	"	"	
Benzene	49	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	10	"	"	"	"	"	"	
Bromodichloromethane	ND	10	"	"	"	"	"	"	
Dibromomethane	ND	10	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	10	"	"	"	"	"	"	
Toluene	ND	20	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	10	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	
1,3-Dichloropropane	ND	10	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	10	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V034-B, P348cc (E106093-01) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	10	ug/l	1	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	10	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	10	"	"	"	"	"	"	
Styrene	ND	10	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	10	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	10	"	"	"	"	"	"	
n-Propylbenzene	ND	10	"	"	"	"	"	"	
Bromobenzene	ND	10	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	10	"	"	"	"	"	"	
2-Chlorotoluene	ND	10	"	"	"	"	"	"	
4-Chlorotoluene	ND	10	"	"	"	"	"	"	
tert-Butylbenzene	ND	10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	10	"	"	"	"	"	"	
sec-Butylbenzene	ND	10	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
n-Butylbenzene	ND	10	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	100	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	10	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	100	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		98.8 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		92.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V031-A, P333cc (E106093-02) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.40	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	5.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	5.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.80	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V031-A, P333cc (E106093-02) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									R-05
Ethylbenzene	ND	5.0	ug/l	0.5	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		96.2 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		102 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V031-B, P348cc (E106093-03) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									R-05
1,1-Difluoroethane (LCC)	ND	20	ug/l	2	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	20	"	"	"	"	"	"	
Chloromethane	ND	20	"	"	"	"	"	"	
Vinyl chloride	ND	1.6	"	"	"	"	"	"	
Bromomethane	ND	20	"	"	"	"	"	"	
Chloroethane	ND	20	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	20	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	20	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	20	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	20	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	40	"	"	"	"	"	"	
2,2-Dichloropropane	ND	20	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Chloroform	ND	4.0	"	"	"	"	"	"	
Bromochloromethane	ND	20	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	20	"	"	"	"	"	"	
1,1-Dichloropropene	ND	20	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.2	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	40	"	"	"	"	"	"	
Benzene	ND	4.0	"	"	"	"	"	"	
Trichloroethene	ND	4.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	20	"	"	"	"	"	"	
Bromodichloromethane	ND	20	"	"	"	"	"	"	
Dibromomethane	ND	20	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
Toluene	ND	40	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	20	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	20	"	"	"	"	"	"	
1,3-Dichloropropane	ND	20	"	"	"	"	"	"	
Tetrachloroethene	ND	4.0	"	"	"	"	"	"	
Dibromochloromethane	ND	20	"	"	"	"	"	"	
Chlorobenzene	ND	4.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V031-B, P348cc (E106093-03) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									R-05
Ethylbenzene	ND	20	ug/l	2	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
m,p-Xylene	ND	20	"	"	"	"	"	"	
o-Xylene	ND	20	"	"	"	"	"	"	
Styrene	ND	20	"	"	"	"	"	"	
Bromoform	ND	20	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	20	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	20	"	"	"	"	"	"	
n-Propylbenzene	ND	20	"	"	"	"	"	"	
Bromobenzene	ND	20	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	20	"	"	"	"	"	"	
2-Chlorotoluene	ND	20	"	"	"	"	"	"	
4-Chlorotoluene	ND	20	"	"	"	"	"	"	
tert-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	20	"	"	"	"	"	"	
sec-Butylbenzene	ND	20	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	20	"	"	"	"	"	"	
n-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	200	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	20	"	"	"	"	"	"	
Naphthalene	ND	4.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	200	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		98.8 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		101 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-B, 1PV, P116cc (E106093-04) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-B, 1PV, P116cc (E106093-04) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		98.9 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		98.8 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-B, 3PV, P348cc (E106093-05) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-B, 3PV, P348cc (E106093-05) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		95.0 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		96.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-B, 7PV, P812cc (E106093-06) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-B, 7PV, P812cc (E106093-06) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		95.0 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		95.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V019-A, P99cc (E106093-07) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V019-A, P99cc (E106093-07) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		98.8 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		96.3 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V011-A, P99cc (E106093-08) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V011-A, P99cc (E106093-08) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		92.9 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		96.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	75-125		"	"	"	"	



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Project: MX062711-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V012-A, P333cc (E106093-09) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	0.21	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	1.0	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	1.4	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V012-A, P333cc (E106093-09) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		91.9 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		105 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %	75-125		"	"	"	"	



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Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V012-A Dup, P383cc (E106093-10) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	0.23	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	1.0	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	1.4	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V012-A Dup, P383cc (E106093-10) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		89.3 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		96.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V021-B, PV348cc (E107002-01) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	0.12	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V021-B, PV348cc (E107002-01) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		108 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		138 %	75-125		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		93.8 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V021-A, PV333cc (E107002-02) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	0.14	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V021-A, PV333cc (E107002-02) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

112 % 75-125

"

"

"

"

Surrogate: 1,2-Dichloroethane-d4

141 % 75-125

"

"

"

"

S-04

Surrogate: 4-Bromofluorobenzene

94.9 % 75-125

"

"

"

"



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Murex Environmental, Inc.
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V021-A-Dup, PV383cc (E107002-03) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	0.12	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
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OS-V021-A-Dup, PV383cc (E107002-03) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11

Ethylbenzene	ND	0.50	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

109 % 75-125

"

"

"

"

Surrogate: 1,2-Dichloroethane-d4

138 % 75-125

"

"

"

"

S-04

Surrogate: 4-Bromofluorobenzene

98.2 % 75-125

"

"

"

"



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V020-B, PV348cc (E107002-04) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	0.11	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V020-B, PV348cc (E107002-04) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

109 % 75-125

"

"

"

"

Surrogate: 1,2-Dichloroethane-d4

133 % 75-125

"

"

"

"

S-04

Surrogate: 4-Bromofluorobenzene

94.5 % 75-125

"

"

"

"



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V029-B, PV348cc (E107002-05) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
1,1-Difluoroethane (LCC)	ND	20	ug/l	2	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	20	"	"	"	"	"	"	
Chloromethane	ND	20	"	"	"	"	"	"	
Vinyl chloride	ND	1.6	"	"	"	"	"	"	
Bromomethane	ND	20	"	"	"	"	"	"	
Chloroethane	ND	20	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	20	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	20	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	20	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	20	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	40	"	"	"	"	"	"	
2,2-Dichloropropane	ND	20	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Chloroform	ND	4.0	"	"	"	"	"	"	
Bromochloromethane	ND	20	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	20	"	"	"	"	"	"	
1,1-Dichloropropene	ND	20	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.2	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	40	"	"	"	"	"	"	
Benzene	770	4.0	"	"	"	"	"	"	
Trichloroethene	ND	4.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	20	"	"	"	"	"	"	
Bromodichloromethane	ND	20	"	"	"	"	"	"	
Dibromomethane	ND	20	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
Toluene	2000	40	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	20	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	20	"	"	"	"	"	"	
1,3-Dichloropropane	ND	20	"	"	"	"	"	"	
Tetrachloroethene	ND	4.0	"	"	"	"	"	"	
Dibromochloromethane	ND	20	"	"	"	"	"	"	
Chlorobenzene	ND	4.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V029-B, PV348cc (E107002-05) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Ethylbenzene	260	20	ug/l	2	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
m,p-Xylene	910	20	"	"	"	"	"	"	
o-Xylene	290	20	"	"	"	"	"	"	
Styrene	ND	20	"	"	"	"	"	"	
Bromoform	ND	20	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	20	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	20	"	"	"	"	"	"	
n-Propylbenzene	27	20	"	"	"	"	"	"	
Bromobenzene	ND	20	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	40	20	"	"	"	"	"	"	
2-Chlorotoluene	ND	20	"	"	"	"	"	"	
4-Chlorotoluene	ND	20	"	"	"	"	"	"	
tert-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	98	20	"	"	"	"	"	"	
sec-Butylbenzene	ND	20	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	20	"	"	"	"	"	"	
n-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	200	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	20	"	"	"	"	"	"	
Naphthalene	ND	4.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	200	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

115 % 75-125

"

"

"

"

Surrogate: 1,2-Dichloroethane-d4

170 % 75-125

"

"

"

"

S-04

Surrogate: 4-Bromofluorobenzene

91.9 % 75-125

"

"

"

"



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-A, PV333cc (E107002-06) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-A, PV333cc (E107002-06) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>									
		105 %	75-125		"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>									
		132 %	75-125		"	"	"	"	S-04
<i>Surrogate: 4-Bromofluorobenzene</i>									
		95.3 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

TPH by MS

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V040-B, 1PV, P116cc (E106077-01) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V040-B, 3PV, P348cc (E106077-02) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V040-B, 7PV, P812cc (E106077-03) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V040-A, P333cc (E106077-04) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V043-A, P336cc (E106077-05) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V043-B, P348cc (E106077-06) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V044-A, P333cc (E106077-07) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V044-B, P348cc (E106077-08) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V049-B, P348cc (E106077-09) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03



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Murex Environmental, Inc.
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Project: MX062711-SB2
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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V048-A, P333cc (E106077-10) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V048-B, P348cc (E106077-11) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V049-A, P333cc (E106077-12) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V042-A, P333cc (E106077-13) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	2000	200	ug/l	0.1	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V042-B, P348cc (E106077-14) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	2700	200	ug/l	0.2	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V042-B Dup, P398cc (E106077-15) Vapor Sampled: 27-Jun-11 Received: 27-Jun-11									
Gasoline (C5-C11)	3100	200	ug/l	0.2	EF12701	27-Jun-11	27-Jun-11	DHS LUFT/8260B	E-03
OS-V047-A, P333cc (E106084-01) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V047-B, P348cc (E106084-02) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V046-A, P333cc (E106084-03) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03



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Project: MX062711-SB2
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Reported:
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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V046-B, P348cc (E106084-04) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V046-B Dup, P398cc (E106084-05) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V045-A, P333cc (E106084-06) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V045-B, P348cc (E106084-07) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V039-A, P333cc (E106084-08) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V039-B, P348cc (E106084-09) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V041-A, P333cc (E106084-10) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V041-B, P348cc (E106084-11) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V035-A, P333cc (E106084-12) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03



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Project: MX062711-SB2
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Reported:
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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V035-B, P348cc (E106084-13) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V037-A, P333cc (E106084-14) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	52000	200	ug/l	0.066	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E, E-03
OS-V037-B, P348cc (E106084-15) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	99000	200	ug/l	0.5	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E, E-03
OS-V036-A, P333cc (E106084-16) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	1200	200	ug/l	0.04	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E-03
OS-V036-B, P348cc (E106084-17) Vapor Sampled: 28-Jun-11 Received: 28-Jun-11									
Gasoline (C5-C11)	72000	200	ug/l	0.066	EF12801	28-Jun-11	28-Jun-11	DHS LUFT/8260B	E, E-03
OS-V038-A, P333cc (E106089-01) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V038-B, P348cc (E106089-02) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V034-A, P333cc (E106089-03) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	2300	200	ug/l	0.2	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V034-B, P348cc (E106089-04) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	14000	200	ug/l	0.5	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03



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Murex Environmental, Inc.
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Project: MX062711-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V033-A, P333cc (E106089-05) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	820	200	ug/l	0.5	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V033-B, P348cc (E106089-06) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	12000	800	ug/l	2	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V032-A, P333cc (E106089-07) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V032-B, P348cc (E106089-08) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	1400	200	ug/l	0.1	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V032-B Dup, P398cc (E106089-09) Vapor Sampled: 29-Jun-11 Received: 29-Jun-11									
Gasoline (C5-C11)	1600	200	ug/l	0.1	EF12904	29-Jun-11	29-Jun-11	DHS LUFT/8260B	E-03
OS-V034-B, P348cc (E106093-01) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	12000	400	ug/l	1	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V031-A, P333cc (E106093-02) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	1100	200	ug/l	0.5	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V031-B, P348cc (E106093-03) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	8000	800	ug/l	2	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V001-B, 1PV, P116cc (E106093-04) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03



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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-B, 3PV, P348cc (E106093-05) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V001-B, 7PV, P812cc (E106093-06) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V019-A, P99cc (E106093-07) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V011-A, P99cc (E106093-08) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V012-A, P333cc (E106093-09) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V012-A Dup, P383cc (E106093-10) Vapor Sampled: 30-Jun-11 Received: 30-Jun-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EF13004	30-Jun-11	30-Jun-11	DHS LUFT/8260B	E-03
OS-V021-B, PV348cc (E107002-01) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	DHS LUFT/8260B	
OS-V021-A, PV333cc (E107002-02) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	DHS LUFT/8260B	
OS-V021-A-Dup, PV383cc (E107002-03) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	DHS LUFT/8260B	



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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V020-B, PV348cc (E107002-04) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	DHS LUFT/8260B	
OS-V029-B, PV348cc (E107002-05) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Gasoline (C5-C11)	30000	800	ug/l	2	EG10102	01-Jul-11	01-Jul-11	DHS LUFT/8260B	
OS-V001-A, PV333cc (E107002-06) Vapor Sampled: 01-Jul-11 Received: 01-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG10102	01-Jul-11	01-Jul-11	DHS LUFT/8260B	



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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12701 - EPA 5030

Blank (EF12701-BLK1)

Prepared & Analyzed: 27-Jun-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12701 - EPA 5030

Blank (EF12701-BLK1)

Prepared & Analyzed: 27-Jun-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane

1.94

"

2.50

77.8

75-125



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Reported:
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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12701 - EPA 5030

Blank (EF12701-BLK1)

Prepared & Analyzed: 27-Jun-11

Surrogate: 1,2-Dichloroethane-d4	1.94		ug/l	2.50		77.8	75-125			
Surrogate: 4-Bromofluorobenzene	2.13		"	2.50		85.2	75-125			

LCS (EF12701-BS1)

Prepared & Analyzed: 27-Jun-11

Dichlorodifluoromethane (F12)	3.04	0.50	ug/l	2.50		122	70-130			
Vinyl chloride	2.25	0.04	"	2.50		90.2	70-130			
Chloroethane	2.37	0.50	"	2.50		94.8	70-130			
Trichlorofluoromethane (F11)	2.02	0.50	"	2.50		80.8	70-130			
1,1-Dichloroethene	2.58	0.50	"	2.50		103	70-130			
Methylene chloride (Dichloromethane)	2.37	0.50	"	2.50		94.7	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	2.38	0.50	"	2.50		95.3	70-130			
trans-1,2-Dichloroethene	2.26	0.50	"	2.50		90.6	70-130			
1,1-Dichloroethane	2.21	0.50	"	2.50		88.3	70-130			
cis-1,2-Dichloroethene	2.19	0.50	"	2.50		87.5	70-130			
Chloroform	2.26	0.10	"	2.50		90.5	70-130			
1,1,1-Trichloroethane	2.29	0.50	"	2.50		91.5	70-130			
Carbon tetrachloride	2.36	0.08	"	2.50		94.2	70-130			
1,2-Dichloroethane (EDC)	2.41	0.10	"	2.50		96.5	70-130			
Benzene	2.33	0.10	"	2.50		93.2	70-130			
Trichloroethene	2.42	0.10	"	2.50		96.6	70-130			
Toluene	2.21	1.0	"	2.50		88.4	70-130			
1,1,2-Trichloroethane	2.40	0.50	"	2.50		96.1	70-130			
Tetrachloroethene	2.43	0.10	"	2.50		97.4	70-130			
Ethylbenzene	2.54	0.50	"	2.50		102	70-130			
1,1,1,2-Tetrachloroethane	2.42	0.50	"	2.50		96.7	70-130			
m,p-Xylene	5.44	0.50	"	5.00		109	70-130			
o-Xylene	2.23	0.50	"	2.50		89.3	70-130			
1,1,2,2-Tetrachloroethane	2.32	0.50	"	2.50		93.0	70-130			

Surrogate: Dibromofluoromethane	2.39		"	2.50		95.4	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.45		"	2.50		97.8	75-125			
Surrogate: 4-Bromofluorobenzene	2.45		"	2.50		98.1	75-125			



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Project Manager: Mr. Jeremy Squire

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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12801 - EPA 5030

Blank (EF12801-BLK1)

Prepared & Analyzed: 28-Jun-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12801 - EPA 5030

Blank (EF12801-BLK1)

Prepared & Analyzed: 28-Jun-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane

2.06

"

2.00

103

75-125



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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12801 - EPA 5030

Blank (EF12801-BLK1)

Prepared & Analyzed: 28-Jun-11

Surrogate: 1,2-Dichloroethane-d4	1.98		ug/l	2.00		99.0	75-125			
Surrogate: 4-Bromofluorobenzene	2.08		"	2.00		104	75-125			

LCS (EF12801-BS1)

Prepared & Analyzed: 28-Jun-11

Dichlorodifluoromethane (F12)	1.96	0.50	ug/l	2.00		98.0	70-130			
Vinyl chloride	1.21	0.04	"	2.00		60.7	70-130			QL-1L
Chloroethane	1.73	0.50	"	2.00		86.5	70-130			
Trichlorofluoromethane (F11)	1.70	0.50	"	2.00		85.2	70-130			
1,1-Dichloroethene	2.13	0.50	"	2.00		106	70-130			
Methylene chloride (Dichloromethane)	1.77	0.50	"	2.00		88.6	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	1.73	0.50	"	2.00		86.3	70-130			
trans-1,2-Dichloroethene	1.96	0.50	"	2.00		98.0	70-130			
1,1-Dichloroethane	1.69	0.50	"	2.00		84.6	70-130			
cis-1,2-Dichloroethene	1.88	0.50	"	2.00		94.2	70-130			
Chloroform	1.60	0.10	"	2.00		79.8	70-130			
1,1,1-Trichloroethane	1.60	0.50	"	2.00		79.9	70-130			
Carbon tetrachloride	1.74	0.08	"	2.00		86.8	70-130			
1,2-Dichloroethane (EDC)	1.43	0.10	"	2.00		71.4	70-130			
Benzene	1.79	0.10	"	2.00		89.5	70-130			
Trichloroethene	1.83	0.10	"	2.00		91.5	70-130			
Toluene	1.79	1.0	"	2.00		89.7	70-130			
1,1,2-Trichloroethane	1.91	0.50	"	2.00		95.3	70-130			
Tetrachloroethene	2.06	0.10	"	2.00		103	70-130			
Ethylbenzene	2.19	0.50	"	2.00		109	70-130			
1,1,1,2-Tetrachloroethane	2.10	0.50	"	2.00		105	70-130			
m,p-Xylene	4.28	0.50	"	4.00		107	70-130			
o-Xylene	2.03	0.50	"	2.00		101	70-130			
1,1,2,2-Tetrachloroethane	1.88	0.50	"	2.00		94.0	70-130			
Surrogate: Dibromofluoromethane	1.93		"	2.00		96.7	75-125			
Surrogate: 1,2-Dichloroethane-d4	1.51		"	2.00		75.6	75-125			
Surrogate: 4-Bromofluorobenzene	2.37		"	2.00		118	75-125			



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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12904 - EPA 5030

Blank (EF12904-BLK1)

Prepared & Analyzed: 29-Jun-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12904 - EPA 5030

Blank (EF12904-BLK1)

Prepared & Analyzed: 29-Jun-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane 2.38 " 2.50 95.1 75-125



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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12904 - EPA 5030

Blank (EF12904-BLK1)

Prepared & Analyzed: 29-Jun-11

Surrogate: 1,2-Dichloroethane-d4	2.46		ug/l	2.50		98.6	75-125			
Surrogate: 4-Bromofluorobenzene	2.57		"	2.50		103	75-125			

LCS (EF12904-BS1)

Prepared & Analyzed: 29-Jun-11

Dichlorodifluoromethane (F12)	2.91	0.50	ug/l	2.50		116	70-130			
Vinyl chloride	2.16	0.04	"	2.50		86.3	70-130			
Chloroethane	2.36	0.50	"	2.50		94.3	70-130			
Trichlorofluoromethane (F11)	1.96	0.50	"	2.50		78.6	70-130			
1,1-Dichloroethene	2.46	0.50	"	2.50		98.5	70-130			
Methylene chloride (Dichloromethane)	2.40	0.50	"	2.50		96.1	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	2.40	0.50	"	2.50		96.0	70-130			
trans-1,2-Dichloroethene	2.36	0.50	"	2.50		94.2	70-130			
1,1-Dichloroethane	2.25	0.50	"	2.50		89.9	70-130			
cis-1,2-Dichloroethene	2.21	0.50	"	2.50		88.5	70-130			
Chloroform	2.34	0.10	"	2.50		93.8	70-130			
1,1,1-Trichloroethane	2.33	0.50	"	2.50		93.1	70-130			
Carbon tetrachloride	2.28	0.08	"	2.50		91.1	70-130			
1,2-Dichloroethane (EDC)	2.62	0.10	"	2.50		105	70-130			
Benzene	2.48	0.10	"	2.50		99.1	70-130			
Trichloroethene	2.51	0.10	"	2.50		100	70-130			
Toluene	2.31	1.0	"	2.50		92.3	70-130			
1,1,2-Trichloroethane	2.72	0.50	"	2.50		109	70-130			
Tetrachloroethene	2.59	0.10	"	2.50		104	70-130			
Ethylbenzene	2.53	0.50	"	2.50		101	70-130			
1,1,1,2-Tetrachloroethane	2.44	0.50	"	2.50		97.4	70-130			
m,p-Xylene	5.59	0.50	"	5.00		112	70-130			
o-Xylene	2.31	0.50	"	2.50		92.3	70-130			
1,1,2,2-Tetrachloroethane	2.47	0.50	"	2.50		98.6	70-130			
Surrogate: Dibromofluoromethane	2.37		"	2.50		94.9	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.38		"	2.50		95.4	75-125			
Surrogate: 4-Bromofluorobenzene	2.43		"	2.50		97.1	75-125			



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760-804-9678 Phone
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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF13004 - EPA 5030

Blank (EF13004-BLK1)

Prepared & Analyzed: 30-Jun-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF13004 - EPA 5030

Blank (EF13004-BLK1)

Prepared & Analyzed: 30-Jun-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane

2.37

"

2.50

94.6

75-125



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Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF13004 - EPA 5030

Blank (EF13004-BLK1)

Prepared & Analyzed: 30-Jun-11

Surrogate: 1,2-Dichloroethane-d4	2.43		ug/l	2.50		97.1	75-125			
Surrogate: 4-Bromofluorobenzene	2.58		"	2.50		103	75-125			

LCS (EF13004-BS1)

Prepared & Analyzed: 30-Jun-11

Dichlorodifluoromethane (F12)	2.78	0.50	ug/l	2.50		111	70-130			
Vinyl chloride	1.96	0.04	"	2.50		78.5	70-130			
Chloroethane	2.25	0.50	"	2.50		89.9	70-130			
Trichlorofluoromethane (F11)	1.71	0.50	"	2.50		68.5	70-130			QL-1L
1,1-Dichloroethene	1.78	0.50	"	2.50		71.3	70-130			
Methylene chloride (Dichloromethane)	1.71	0.50	"	2.50		68.3	70-130			QL-1L
1,1,2 Trichlorotrifluoroethane (F113)	1.72	0.50	"	2.50		68.9	70-130			QL-1L
trans-1,2-Dichloroethene	1.66	0.50	"	2.50		66.3	70-130			QL-1L
1,1-Dichloroethane	2.13	0.50	"	2.50		85.2	70-130			
cis-1,2-Dichloroethene	2.18	0.50	"	2.50		87.0	70-130			
Chloroform	2.26	0.10	"	2.50		90.6	70-130			
1,1,1-Trichloroethane	2.30	0.50	"	2.50		91.9	70-130			
Carbon tetrachloride	2.25	0.08	"	2.50		90.2	70-130			
1,2-Dichloroethane (EDC)	2.36	0.10	"	2.50		94.4	70-130			
Benzene	2.42	0.10	"	2.50		96.7	70-130			
Trichloroethene	2.42	0.10	"	2.50		96.8	70-130			
Toluene	2.35	1.0	"	2.50		93.8	70-130			
1,1,2-Trichloroethane	2.53	0.50	"	2.50		101	70-130			
Tetrachloroethene	2.49	0.10	"	2.50		99.7	70-130			
Ethylbenzene	2.54	0.50	"	2.50		101	70-130			
1,1,1,2-Tetrachloroethane	2.50	0.50	"	2.50		100	70-130			
m,p-Xylene	5.52	0.50	"	5.00		110	70-130			
o-Xylene	2.27	0.50	"	2.50		90.9	70-130			
1,1,2,2-Tetrachloroethane	2.55	0.50	"	2.50		102	70-130			
Surrogate: Dibromofluoromethane	2.42		"	2.50		96.7	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.35		"	2.50		94.0	75-125			
Surrogate: 4-Bromofluorobenzene	2.40		"	2.50		96.0	75-125			



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG10102 - EPA 5030

Blank (EG10102-BLK1)

Prepared & Analyzed: 01-Jul-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Reported:
15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG10102 - EPA 5030

Blank (EG10102-BLK1)

Prepared & Analyzed: 01-Jul-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane

2.39

"

2.50

95.5

75-125



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15-Jul-11 12:47

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG10102 - EPA 5030

Blank (EG10102-BLK1)

Prepared & Analyzed: 01-Jul-11

Surrogate: 1,2-Dichloroethane-d4	3.08		ug/l	2.50		123	75-125			
Surrogate: 4-Bromofluorobenzene	2.17		"	2.50		86.7	75-125			

LCS (EG10102-BS1)

Prepared & Analyzed: 01-Jul-11

Dichlorodifluoromethane (F12)	2.01	0.50	ug/l	2.50		80.4	70-130			
Vinyl chloride	2.37	0.04	"	2.50		95.0	70-130			
Chloroethane	2.75	0.50	"	2.50		110	70-130			
Trichlorofluoromethane (F11)	2.39	0.50	"	2.50		95.7	70-130			
1,1-Dichloroethene	2.48	0.50	"	2.50		99.4	70-130			
Methylene chloride (Dichloromethane)	2.49	0.50	"	2.50		99.6	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	2.47	0.50	"	2.50		98.7	70-130			
trans-1,2-Dichloroethene	2.35	0.50	"	2.50		94.0	70-130			
1,1-Dichloroethane	2.68	0.50	"	2.50		107	70-130			
cis-1,2-Dichloroethene	2.18	0.50	"	2.50		87.2	70-130			
Chloroform	2.44	0.10	"	2.50		97.7	70-130			
1,1,1-Trichloroethane	2.16	0.50	"	2.50		86.6	70-130			
Carbon tetrachloride	2.02	0.08	"	2.50		80.7	70-130			
1,2-Dichloroethane (EDC)	2.91	0.10	"	2.50		116	70-130			
Benzene	2.47	0.10	"	2.50		98.7	70-130			
Trichloroethene	2.29	0.10	"	2.50		91.6	70-130			
Toluene	2.43	1.0	"	2.50		97.1	70-130			
1,1,2-Trichloroethane	2.50	0.50	"	2.50		100	70-130			
Tetrachloroethene	1.94	0.10	"	2.50		77.5	70-130			
Ethylbenzene	2.19	0.50	"	2.50		87.6	70-130			
1,1,1,2-Tetrachloroethane	2.18	0.50	"	2.50		87.3	70-130			
m,p-Xylene	4.07	0.50	"	5.00		81.3	70-130			
o-Xylene	2.31	0.50	"	2.50		92.4	70-130			
1,1,2,2-Tetrachloroethane	2.91	0.50	"	2.50		116	70-130			
Surrogate: Dibromofluoromethane	2.23		"	2.50		89.3	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.59		"	2.50		104	75-125			
Surrogate: 4-Bromofluorobenzene	1.96		"	2.50		78.2	75-125			



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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
15-Jul-11 12:47

TPH by MS - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF12701 - EPA 5030

Blank (EF12701-BLK1)

Prepared & Analyzed: 27-Jun-11

Gasoline (C5-C11)	ND	200	ug/l							E-03
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Batch EF12801 - EPA 5030

Blank (EF12801-BLK1)

Prepared & Analyzed: 28-Jun-11

Gasoline (C5-C11)	ND	200	ug/l							E-03
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Batch EF12904 - EPA 5030

Blank (EF12904-BLK1)

Prepared & Analyzed: 29-Jun-11

Gasoline (C5-C11)	ND	200	ug/l							E-03
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Batch EF13004 - EPA 5030

Blank (EF13004-BLK1)

Prepared & Analyzed: 30-Jun-11

Gasoline (C5-C11)	ND	200	ug/l							E-03
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Batch EG10102 - EPA 5030

Blank (EG10102-BLK1)

Prepared & Analyzed: 01-Jul-11

Gasoline (C5-C11)	ND	200	ug/l							
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Project: MX062711-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

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15-Jul-11 12:47

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
QL-1L	The LCS and/or LCSD recoveries fell below the established control specifications for this analyte. Any result for this compound is qualified and should be considered biased low.
E-03	The reported gasoline result is an estimated value. Gasoline results were requested after the samples were analyzed; therefore a gasoline standard was not analyzed prior to sample analysis.
E-03	The reported gasoline result is an estimated value. Gasoline results were requested after the samples were analyzed; therefore a gasoline standard was not analyzed prior to sample analysis.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



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Reported:
15-Jul-11 12:47

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS

Certificate# 2742, 2745, & 2741 approved for LUFT

Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.



Mobile
Geochemistry
Inc.

Chain of Custody Record

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 6/27/11
H&P Project # MX062711-SB2
Outside Lab: _____

Client: Murex Environmental Inc. Collector: Dave Pride Page: 1 of 2
Address: 2640 Walnut Ave. Unit F Client Project # 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA 92780 Location: 12345 Lakeland Rd. Santa Fe Springs, CA
Email: jsquire@murexenv.com, frances@squiremurexenv.com Phone: (714) 508-0800 Fax: _____ Turn around time: on site

Geotracker EDF: Yes ☒ No ☐

Global ID: SL372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°C

Special Instructions: Water in 5" probe 05-V049-A. Purged 4-sec of water and let equilibrate ~ 60 min. Resampled at 1410, no water present. Report estimated TPH values
JS

Lab Work Order # E106077 EF12701

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B	8015M TPH	418.1 TRPH	VOC's: Full List	VOC's: Short List/DTSC	VOC's: SAM, 8260B	Naphthalene	Oxygenates	TPH gas	Ketones	Other	Leak Check Compound	Methane	Fixed Gases
								<input type="checkbox"/> BTEX/OXY	<input type="checkbox"/> TPH gas	<input type="checkbox"/> g	<input type="checkbox"/> d	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> SAM A	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input checked="" type="checkbox"/> 1, 1 DFA	<input type="checkbox"/> OTHER	<input type="checkbox"/> O2
05-V040-B	1PV	DS-V040	116cc	0948	6/27/11	Vapor	1					X				X	X			X		
05-V040-B	3PV	05-V040	348cc	0950			1															
05-V040-B	7PV	05-V040	812cc	0953			1															
05-V040-A		05-V040	333cc	1026			1															
05-V043-A		05-V043	336cc	1146			1															
05-V043-B		05-V043	348cc	1155			1															
05-V044-A		05-V044	333cc	1218			1															
05-V044-B		05-V044	348cc	1221			1															
05-V049-B		05-V049	348cc	1253			1															
05-V048-A		05-V048	333cc	1312			1															

Relinquished by: (Signature) F. Sosik (company) Murex Env. Received by: (Signature) Dave Pride (company) H&P
Relinquished by: (Signature) _____ (company) _____ Received by: (Signature) _____ (company) _____
Relinquished by: (Signature) _____ (company) _____ Received by: (Signature) _____ (company) _____

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction

☐ Disposal

☐ Return to client

☐ Pickup



Date: 6/27/11
H&P Project # MX062711-5B2
Outside Lab: _____

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Client: Murex Environmental Inc. Collector: Dave Pride Page: 2 of 2
Address: 2640 Walnut Ave. Unit F Client Project #: 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA 92780 Location: 12345 Lakeland Rd. Santa Fe Springs
Email: jeremysquire@murexenv.com, francesca@murexenv.com Phone: (714) 508-0800 Fax: Turn around time: on site

Geotracker EDF: Yes ☒ No ☐

Global ID: 56372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°C

Special Instructions: Report estimated TPH values

Lab Work Order # E106077

[illegible]

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction

☐ Disposal☐ Return to client☐ PICKUP



Mobile
Geochemistry
Inc.

Chain of Custody Record

☐ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: June 28th, 2011
H&P Project # MX062711-3G2
Outside Lab: NA

Client: MUREX ENV. Collector: Russ Kickert Page: 1 of 2
Address: 2640 Walnut, Unit F Client Project # 110462-001/01/1003-001-200 Project Contact: Jeremy Squire
Tustin, CA Location: 12345 Lakeland Rd.
Email: Phone: (714) 508-0800 Fax: Turn around time: Field

Geotracker EDF: Yes ☒ No ☐

Global ID: SL372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°

Special Instructions:

Report estimated TPH values for

Lab Work Order # E106094, EF12901

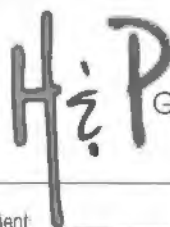
Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total	SOIL/GW		SOIL VAPOR/AIR ANALYSIS											
								8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B	8260B				
05-V047-A		333	0835	6-28	VAPOR	GLASS SYRINGE	1			x		x	x	(X) 10E		x					
1 - B		348	0850				1														
05-V046-A		333	0938				1														
1 - B		348	0952				1														
1 - B Dup		348	1005				1														
05-V045-A		333	1030				1														
1 - B		348	1045				1														
05-V039-A		333	1111				1														
1 - B		348	1122				1														
05-V041-A		333	1158				1														

Relinquished by: (Signature) <u>F. Soric</u>	(company) <u>MUREX ENV.</u>	Received by: (Signature) <u>[Signature]</u>	(company) <u>H&P</u>	Date: <u>6-28-11</u>	Time: <u>1615</u>
Relinquished by: (Signature) <u>[Signature]</u>	(company)	Received by: (Signature) <u>[Signature]</u>	(company)	Date:	Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction.

☐ Disposal ☐ Return to client ☐ Pickup



Mobile
Geochemistry
Inc.

Chain of Custody Record

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☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: June 28th, 2011
H&P Project # MX062711-SB2
Outside Lab: _____

Client: Murex Env. Collector: Russ Kinkert Page: 2 of 2
Address: 2640 Walnut, Unit F Client Project # 1003-001-200 Project Contact: Jeremy Squire
Tustin, CA Location: 12345 Lakeland
Email: _____ Phone: (714) 508-0800 Fax: _____ Turn around time: Field

Geotracker EDF: Yes ☒ No ☐

Global ID: SL372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 21°

Special Instructions:

Report estimated TPH values jfe

Lab Work Order # E106084, E F12801

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B	8015M TPH	418.1 TRPH	VOC's: Full List	VOC's: Short List/DTSC	VOC's: SAM, 8260B	Naphthalene	Oxygenates	TPHv gas	Kelones	Other	Leak Check Compound	Methane	Fixed Gases
-11 OS-V041-B		348	1217	6-28	Vapor	GLASS syringe	1															
-12 OS-V035-A		333	1225				1															
-13 L -B		348	1240				1															
-14 OS-V033-A		333	1330				1															
-15 L -B		348	1345				1															
-16 OS-V036-A		333	1445				1															
-17 L -B		348	1507				1															

Relinquished by: (Signature) <u>F. Sasic</u> (company) <u>MUREX ENV</u>	Received by: (Signature) <u>[Signature]</u> (company) <u>[Signature]</u>	Date: <u>6-28-11</u>	Time: <u>1615</u>
Relinquished by: (Signature) _____ (company) _____	Received by: (Signature) _____ (company) _____	Date: _____	Time: _____
Relinquished by: (Signature) _____ (company) _____	Received by: (Signature) _____ (company) _____	Date: _____	Time: _____

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction:

☐ Disposal

☐ Return to client

☐ Pickup



Mobile
Geochemistry
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Chain of Custody Record

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 6/29/11
H&P Project # MX062711-SB2
Outside Lab: _____

Client: Murex Environmental Inc. Collector: Aave Aide Page: 1 of 1
Address: 2640 Walnut Ave. Unit F Client Project # 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA 92780 Location: 12345 Lakeland Rd. Santa Fe Springs, CA
Email: jsquire@murexenv.com; francesosic@murexenv.com Phone: (714) 508-0800 Fax: _____ Turn around time: on site

Geotracker EDF: Yes ☒ No ☐

Global ID: SL372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°C

Special Instructions: Resampled 05-U034-A e 1314. Resampled 05-U034-B e 1326. Resampled 05-U033-A e 1422. Resampled 05-U033-B e 1429.

Report estimated TPH values

Lab Work Order # E106089

EF12904

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total #	SOIL/GW												SOIL VAPOR/AIR ANALYSIS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
								B	B	B	A	V	V	V	N	C	T	K	C	L	N	F	B	B	B	A	V	V	V	N	C	T	K	C	L	N	F																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
05-V038-A	05-V038	333cc	1002	6/29/11	Vapor	Glass Syringe	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Relinquished by: (Signature) F. Sosic (company) Murex Env. Date: 6/29/2011

Relinquished by: (Signature) _____ (company) _____

Relinquished by: (Signature) _____ (company) _____

Received by: (Signature) Paul Pate (company) H&P

Received by: (Signature) _____ (company) _____

Received by: (Signature) _____ (company) _____

Date: 6/29/11 Time: 1610

Date: _____ Time: _____

Date: _____ Time: _____

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction:

☐ Disposal ☐ Return to client ☐ Pickup



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Chain of Custody Record

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☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 6/30/11
H&P Project # MX062711-SB2
Outside Lab: _____

Client: Murex Environmental Inc. Collector: Dave Pride Page: 1 of 1
Address: 2640 Walnut Ave. Unit F Client Project # 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA 92780 Location: 12345 Lakeland Rd. Santa Fe Springs, CA
Email: jeremy.squire@murexenv.com; frances.sosice@murexenv.com Phone: (714) 508-0800 Fax: _____ Turn around time: on site

Geotracker EDF: Yes ☒ No ☐

Global ID: SL372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°C

Special Instructions:

Report estimated TPH values *JS*

Lab Work Order #

E106093

EF13004

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total #	SOIL/GW		SOIL VAPOR/AIR ANALYSIS														
								B	8	8	4	V	V	V	Z	C	T	K	C	L	N	F		
05-V034-B	05-U034	348cc	1047	6/30/11	Vapor	Galaxy Syringe	1						X				X	(Y)			X			
05-V031-A	05-U031	333cc	1138				1																	
05-V031-B	05-U031	348cc	1209				1																	
05-U001-B 1PV	05-U001	116cc	1228				1																	
05-U001-B 3PV	05-U001	348cc	1230				1																	
05-U001-B 7PV	05-U001	812cc	1233				1																	
05-U019-A	05-U019	99cc	1435				1																	
05-U011-A	05-U011	99cc	1449				1																	
05-U012-A	05-U012	333cc	1524				1																	
05-U012-A Dup	05-U012	383cc	1525	✓		✓	1						✓					✓				✓		

Relinquished by: (Signature)

F. Sosic 6.30.2011 Murex

Relinquished by: (Signature)

Relinquished by: (Signature)

(company)

(company)

(company)

Received by: (Signature)

David Link

Received by: (Signature)

Received by: (Signature)

(company)

H&P

(company)

(company)

Date

6/30/11

Date

Date

Time

1600

Time

Time

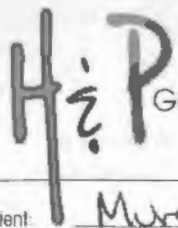
*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction:

☐ Disposal

☐ Return to client

☐ Pickup



Mobile
Geochemistry
Inc.

Chain of Custody Record

- ☐ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 07/01/11
H&P Project # MX062711-SB2
Outside Lab: _____

Client: Murex Env., Inc. Collector: Robert A. Lepe Page: 1 of 1
Address: 2640 Walnut Ave., Unit F Client Project # 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA Location: 12345 Lakeland Rd., Santa Fe Springs, CA
Email: jeremy.squire@murexenv.com Phone: (714) 506-0800 Fax: _____ Turn around time: Mobile Lab

Geotracker EDF: Yes ☐ No ☐ Sample Receipt
Global ID: _____ In tact: ☐ Yes ☐ No
Excel EDD: Yes ☐ No ☐ Seal intact: ☐ Yes ☐ No ☐ N/A
Cold: ☐ Yes ☐ No ☐ N/A
Temperature: _____

Special Instructions: _____
Lab Work Order # E107002 / ELG 10102

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total	SOIL/GW	SOIL VAPOR/AIR ANALYSIS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
OS-V021-B		348	0840	07/01/11	Vapor	Glass																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

Relinquished by: (Signature) [Signature] (company) F. Squire Received by: (Signature) [Signature] (company) HiP
Relinquished by: (Signature) [Signature] (company) F. Squire Received by: (Signature) [Signature] (company) HiP
Relinquished by: (Signature) [Signature] (company) F. Squire Received by: (Signature) [Signature] (company) HiP

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back. Sample disposal instruction: ☐ Disposal ☐ Return to client ☐ Pickup



Vapor Sampling with Mobile Lab (Syringe*)

Site Address: 12345 Lakeland

Date: 6/27/11

Company: Murphy Environmental

H&P Project #: MX067211-SB2

Arrival Time: 0750

Field Rep(s): Frank Sasic

H&P Rep(s): Dave Pride / Dave Petryshin

Departure Time:

			Probe Specifications						Sampling Information				Field Notes:	
Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)	Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓=Pass)	Probe Pressure (" Hg)			
1	OS-V040-B	1PV	SUC014	0948	10	12	1/8	1.5	12	116	~200	✓	No Vac	
2	OS-V040-B	3PV	SUC015	0950	10	12	1/8	1.5	12	348	~200	✓	No Vac	
3	OS-V040-B	7PV	SUC016	0953	10	12	1/8	1.5	12	812	~200	✓	No Vac	
4	OS-V040-A		SUC017	1026	5	7	1/8	1.5	12	333	~200	✓	No Vac	
5	OS-V043-A		SUC018	1146	6	8	1/8	1.5	12	336	~200	✓	No Vac	
6	OS-V043-B		SUC019	1155	10	12	1/8	1.5	12	348	~200	✓	No Vac	
7	OS-V044-A		SUC014	1218	5	7	1/8	1.5	12	333	~200	✓	No Vac	
8	OS-V044-B		SUC015	1221	10	12	1/8	1.5	12	348	~200	✓	No Vac	
9	OS-V049-B		SUC017	1253	10	12	1/8	1.5	12	348	~200	✓	No Vac	
10	OS-V048-A		SUC018	1312	5	7	1/8	1.5	12	333	~200	✓	No Vac	
11	OS-V048-B		SUC019	1319	10	12	1/8	1.5	12	348	~200	✓	No Vac	
12	OS-V049-A		SUC014	1410	5	7	1/8	1.5	12	333	~200	✓	No Vac	
13	OS-V042-A		SUC015	1436	5	7	1/8	1.5	12	333	~200	✓	No Vac	Resampled @ 1549
14	OS-V042-B		SUC016	1503	10	12	1/8	1.5	12	348	~200	✓	No Vac	Resampled @ 1553
15	OS-V042-B Dup		SUC017	1504	10	12	1/8	1.5	12	348	~200	✓	No Vac	Resampled @ 1554

Purge Volume Test (PVT) Information				
PVT performed on Probe ID:	05-V040-B			
Tubing:	Length: 12	Diameter: 1/8	1 Volume: 12	
Sand Pack (if included in purge volume calculation):	Height: 12	Diameter: 1.5	1 Volume: 104	
PVT Increments:	1 PV = 116 3 PV = 348 7 PV = 812			
PV Amount Selected:	Default 3PV		Selected by: Murphy Environmental	

Leak Check Information	
Leak Check Compound:	<input checked="" type="checkbox"/> 1,1,1-DFA <input type="checkbox"/> 1,1,1,2-TFA <input type="checkbox"/> IPA <input type="checkbox"/> Other
Procedure:	Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs):

Client Signature:

TD



Vapor Collection Log Sheet

Project Name / Location: **MX062711-SB2**

Client: **Murex Env.**

Field Rep: **Franc**

H&P Representative: **Russ**

Date: **28 6/4/2011**

Arrival Time: **8:00**

Departure Time: **1615**

Overtime: **N/A**

Approved By: **N/A**

	Sample ID	Syringe ID	Sample Collection Time	Probe Depth (ft)	Boring Diam (in) if applicable	Sandpack Depth (inches)	Tubing Length (ft)	Tubing Diam. (in.)	Sample Volume collected	Purge Volume (mL)	Flow Rate (mL/min)	Probe Vac Pressure Notes	Leak Check Type: 1,1-DFA	Shut In Test
1	OS-V047-A	SV0036	0835	5'	1.5	12	7	1/8	50cc	333cc	100cc	0	✓	PASS
2	└ -B	SV0037	0850	10'			12			348cc		0	✓	PASS
3	OS-V0-46-A	SV0038	0938	5'			7			333cc		0	✓	PASS
4	└ -B	SV0036	0952	10'			12			348cc		0	✓	PASS
5	└ -B Dup	SV0037	1005	10'			12			398cc		0	✓	PASS
6	OS-V0-45-A	SV0038	1030	5'			7			333cc		0	✓	PASS
7	└ -B	SV0036	1045	10'			12			348cc		0	✓	PASS
8	OS-V0-39-A	SV0037	1111	5'			7			333		0	✓	PASS
9	└ -B	SV0038	1122	10'			12			348		0	✓	PASS
10	OS-V0-41-A	SV0036	1158	5'			7			333		-6	✓	PASS
11	└ -B	SV0037	1217	10			12			348		-1	✓	PASS
12	OS-V0-35-A	SV0038	1225	5			7			333		0	✓	PASS
13	└ -B	SV0036	1240	10			12			348		-5	✓	PASS
14	OS-V0-37-A	SV0037	1330	5			7			333		0	✓	PASS
15	└ -B	SV0038	1345	10			12			348		-1	✓	PASS
16	OS-V0-36-A	SV0036	1445	5			7			333		0	✓	PASS
17	└ -B	SV0037	1507	10			12			348		0	✓	PASS
18														
19														

Handwritten signature/initials



Vapor Sampling with Mobile Lab (Syringe*)

Site Address: 12345 Lakeland Rd. Santa Fe Springs, CA Date: 8/29/11
 Company: Murphy Environmental H&P Project #: MX062711-SB2 Arrival Time: 0800
 Field Rep(s): Frank Jozic H&P Rep(s): Dave Pridge / Dave Potryshin Departure Time: _____

			Probe Specifications						Sampling Information				
	Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)	Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓=Pass)	Probe Pressure (" Hg)	Field Notes.
1	OS-V038-A	SU0014	1002	5	7	1/8	1.5	12	333	~200	✓	No Vac.	
2	OS-V038-B	SU0015	1010	10	12	1/8	1.5	12	348	~200	✓	No Vac.	
3	OS-V034-A	SU0016	1103	5	7	1/8	1.5	12	333	~200	✓	No Vac.	
4	OS-V034-B	SU0017	1114	10	12	1/8	1.5	12	348	~200	✓	No Vac.	
5	OS-V033-A	SU0018	1129	5	7	1/8	1.5	12	353	~200	✓	No Vac.	
6	OS-V033-B	SU0019	1138	10	12	1/8	1.5	12	348	~200	✓	No Vac.	
7	OS-V032-A	SU0014	1539	5	7	1/8	1.5	12	333	~200	✓	No Vac.	
8	OS-V032-B	SU0015	1547	10	12	1/8	1.5	12	348	~200	✓	No Vac.	
9	OS-V032-B Dup	SU0016	1548	10	12	1/8	1.5	12	398	~200	✓	No Vac.	
10													
11													
12													
13													
14													
15													

Purge Volume Test (PVT) Information			
PVT performed on Probe ID:			
Tubing:	Length:	Diameter:	1 Volume:
Sand Pack (if included in purge volume calculation):	Height:	Diameter:	1 Volume:
PVT Increments:	PV =	PV =	PV =
PV Amount Selected:	Selected by:		

Leak Check Information	
Leak Check Compound:	<input checked="" type="checkbox"/> 1,1-DFA <input type="checkbox"/> 1,1,1,2-TFA <input type="checkbox"/> IPA <input type="checkbox"/> Other
Procedure:	Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs): _____
 Client Signature: _____

709



Vapor Sampling with Mobile Lab (Syringe*)

Site Address: 15345 Lakeland Rd. Santa Fe Springs, CA Date: 6/30/11
 Company: MURPX Environmental H&P Project #: MX062711-SB2 Day 4 Arrival Time: 0810
 Field Rep(s): Frank Sosic, Sprague Spivey H&P Rep(s): Dave Arde, Dave Potyshin
 Am. Gas Sampling Departure Time: 1610

			Probe Specifications					Sampling Information				Field Notes:	
Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)	Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓=Pass)	Probe Pressure (" Hg)		
1	OS-V034-B	SU0014	1047	10	12	3/8	1.5	12	348	~200	✓	N. Vac.	
2	OS-V031-A	SU0015	1138	5	7	3/8	1.5	12	333	~200	✓	Vac=8"	
3	OS-V031-B	SU0016	1209	10	12	3/8	1.5	12	348	~200	✓	N. Vac.	
4	OS-V001-B 1PV	SU0017	1228	10	12	3/8	1.5	12	116	~200	✓	N. Vac.	
5	OS-V001-B 3PV	SU0018	1230	10	12	3/8	1.5	12	348	~200	✓	Vac=3"	
6	OS-V001-B 7PV	SU0019	1233	10	12	3/8	1.5	12	812	~200	✓	Vac=6"	
7	OS-V019-A	SU0014	1435	5	7	3/8	0.5	12	99	~200	✓	N. Vac.	
8	OS-V011-A	SU0015	1449	5	7	3/8	0.5	12	99	~200	✓	N. Vac.	
9	OS-V012-A	SU0016	1524	5	7	3/8	1.5	12	333	~200	✓	N. Vac.	
10	OS-V012-A Dup	SU0017	1525	5	7	3/8	1.5	12	383	~200	✓	N. Vac.	
11													
12													
13													
14													
15													

Purge Volume Test (PVT) Information			
PVT performed on Probe ID:	05-V001-B		
Tubing:	Length: 12	Diameter: 1/8	1 Volume: 12
Sand Pack (if included in purge volume calculation):	Height: 12	Diameter: 1.5	1 Volume: 104
PVT Increments:	1 PV = 116	3 PV = 348	7 PV = 812
PV Amount Selected:	3 PV		
	Selected by: MURPX Environmental		

Leak Check Information	
Leak Check Compound	<input checked="" type="checkbox"/> 1,1,1-DFA <input type="checkbox"/> 1,1,1,2-TFA <input type="checkbox"/> IPA <input type="checkbox"/> Other
Procedure:	Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs):
 Client Signature:

203



Mobile
Geochemistry
Inc.

Vapor Sampling with Mobil

Site Address: _____

Company: _____

H&P Project #: MX062711-B2

Field Rep(s): _____

H&P Rep(s): Robert &

Dane Petryshin

				Probe Specifications			
	Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)
1	OS-V021-B	SV0011	0840	10'	12'	1/8	1.5
2	OS-V021-A	SV0008	0842	5'	7'		
3	OS-V021-A-Dup	SV0009	0843	5	7'		
4	OS-V020-B	SV0010	1010	10	12'		
5	OS-V029-B	SV0011	1027	10	12'		
6	OS-V029-A	SV0012	1028	5'	7		
7	OS-V001-A	SV0013	1317	5	7		
8							
9							
10							
11							
12							
13							
14							
15							

NOT
Report

Purge Volume Test (PVT) Information

PVT performed on Probe ID:			
Tubing:	Length:	Diameter:	1 Volume:
Sand Pack (if included in purge volume calculation):	Height:	Diameter:	1 Volume:
PVT Increments:	___ PV =	___ PV =	___ PV =
PV Amount Selected:	Selected by:		

10

e Lab (Syringe*)

Date: 07/01/11

Arrival Time: 07:00 (Ready @ 8:00)

Departure Time:

Sampling Information					Field Notes:
Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓=Pass)	Probe Pressure (" Hg)	
12	348	200	✓	~9	
	333		✓	~5	
	383		✓	~5	
	348		✓	Ø	
	348		✓	Ø	
	NA		✓	30+	water in sample and high pressure
	333		✓	Ø	

NO sample taken

Leak Check Information

Leak Check Compound: ☒ 1,1-DFA ☐ 1,1,1,2-TFA ☐ IPA ☐ Other

Procedure: Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs):

Client Signature:



Mobile
Geochemistry
Inc.

Mr. Jeremy Squire
Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

21 July 2011



H&P Project: MX070811-SB2
Client Project: 1003-001-200 / Fmr CENCO Refinery

Dear Mr. Jeremy Squire:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 7/11/2011 -7/13/2011 which were analyzed in accordance with the attached Chain of Custody record(s).

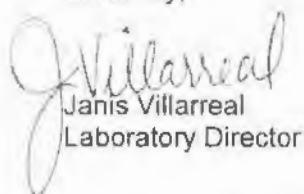
The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,


Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845





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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-V005-A, P21cc	E107025-01	Vapor	11-Jul-11	11-Jul-11
OS-V005-B, P36cc	E107025-02	Vapor	11-Jul-11	11-Jul-11
OS-V023-A, P21cc	E107025-03	Vapor	11-Jul-11	11-Jul-11
OS-V023-B, P36cc	E107025-04	Vapor	11-Jul-11	11-Jul-11
OS-V024-A, P21cc	E107025-05	Vapor	11-Jul-11	11-Jul-11
OS-V006-A, P21cc	E107025-06	Vapor	11-Jul-11	11-Jul-11
OS-V006-B, P36cc	E107025-07	Vapor	11-Jul-11	11-Jul-11
OS-V022-A, P333cc	E107025-08	Vapor	11-Jul-11	11-Jul-11
OS-V022-B, P348cc	E107025-09	Vapor	11-Jul-11	11-Jul-11
OS-V022-B Dup, P398cc	E107025-10	Vapor	11-Jul-11	11-Jul-11
OS-V004-A, P333cc	E107025-11	Vapor	11-Jul-11	11-Jul-11
OS-V004-B, P348cc	E107025-12	Vapor	11-Jul-11	11-Jul-11
OS-V020-A, P21cc	E107029-01	Vapor	12-Jul-11	12-Jul-11
OS-V010-A, P21cc	E107029-02	Vapor	12-Jul-11	12-Jul-11
OS-V010-B, P36cc	E107029-03	Vapor	12-Jul-11	12-Jul-11
OS-V009-A, P21cc	E107029-04	Vapor	12-Jul-11	12-Jul-11
OS-V009-B, P36cc	E107029-05	Vapor	12-Jul-11	12-Jul-11
OS-V008-A, P21cc	E107029-06	Vapor	12-Jul-11	12-Jul-11
OS-V008-B, P36cc	E107029-07	Vapor	12-Jul-11	12-Jul-11
OS-V007-A, P21cc	E107029-08	Vapor	12-Jul-11	12-Jul-11
OS-V007-B, P36cc	E107029-09	Vapor	12-Jul-11	12-Jul-11
OS-V007-B Dup, P86cc	E107029-10	Vapor	12-Jul-11	12-Jul-11
OS-V003-A, P21cc	E107035-01	Vapor	13-Jul-11	13-Jul-11
OS-V003-B, P36cc	E107035-02	Vapor	13-Jul-11	13-Jul-11
OS-V002-A, P21cc	E107035-03	Vapor	13-Jul-11	13-Jul-11
OS-V002-B, P36cc	E107035-04	Vapor	13-Jul-11	13-Jul-11
OS-V030-A, P21cc	E107035-05	Vapor	13-Jul-11	13-Jul-11
OS-V030-B, P36cc	E107035-06	Vapor	13-Jul-11	13-Jul-11



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-V030-B Dup, P86cc	E107035-07	Vapor	13-Jul-11	13-Jul-11



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V005-A, P21cc (E107025-01) Vapor									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.40	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	5.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	5.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.80	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V005-A, P21cc (E107025-01) Vapor									R-05
Ethylbenzene	ND	5.0	ug/l	0.5	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		95.0 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		92.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V005-B, P36cc (E107025-02) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									R-05
1,1-Difluoroethane (LCC)	ND	20	ug/l	2	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	20	"	"	"	"	"	"	
Chloromethane	ND	20	"	"	"	"	"	"	
Vinyl chloride	ND	1.6	"	"	"	"	"	"	
Bromomethane	ND	20	"	"	"	"	"	"	
Chloroethane	ND	20	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	20	"	"	"	"	"	"	
1,1-Dichloroethene	ND	20	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	20	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	20	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	20	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	40	"	"	"	"	"	"	
1,1-Dichloroethane	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	40	"	"	"	"	"	"	
2,2-Dichloropropane	ND	20	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	20	"	"	"	"	"	"	
Chloroform	ND	4.0	"	"	"	"	"	"	
Bromochloromethane	ND	20	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	20	"	"	"	"	"	"	
1,1-Dichloropropene	ND	20	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.2	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	40	"	"	"	"	"	"	
Benzene	ND	4.0	"	"	"	"	"	"	
Trichloroethene	ND	4.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	20	"	"	"	"	"	"	
Bromodichloromethane	ND	20	"	"	"	"	"	"	
Dibromomethane	ND	20	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
Toluene	ND	40	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	20	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	20	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	20	"	"	"	"	"	"	
1,3-Dichloropropane	ND	20	"	"	"	"	"	"	
Tetrachloroethene	ND	4.0	"	"	"	"	"	"	
Dibromochloromethane	ND	20	"	"	"	"	"	"	
Chlorobenzene	ND	4.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V005-B, P36cc (E107025-02) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									R-05
Ethylbenzene	ND	20	ug/l	2	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
m,p-Xylene	ND	20	"	"	"	"	"	"	
o-Xylene	ND	20	"	"	"	"	"	"	
Styrene	ND	20	"	"	"	"	"	"	
Bromoform	ND	20	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	20	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	20	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	20	"	"	"	"	"	"	
n-Propylbenzene	ND	20	"	"	"	"	"	"	
Bromobenzene	ND	20	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	20	"	"	"	"	"	"	
2-Chlorotoluene	ND	20	"	"	"	"	"	"	
4-Chlorotoluene	ND	20	"	"	"	"	"	"	
tert-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	20	"	"	"	"	"	"	
sec-Butylbenzene	ND	20	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	20	"	"	"	"	"	"	
n-Butylbenzene	ND	20	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	20	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	200	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	20	"	"	"	"	"	"	
Naphthalene	ND	4.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	20	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	200	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		93.8 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		91.7 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V023-A, P21cc (E107025-03) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V023-A, P21cc (E107025-03) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	2.0	ug/l	0.2	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		89.9 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		94.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V023-B, P36cc (E107025-04) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	1	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	10	"	"	"	"	"	"	
Chloromethane	ND	10	"	"	"	"	"	"	
Vinyl chloride	ND	0.80	"	"	"	"	"	"	
Bromomethane	ND	10	"	"	"	"	"	"	
Chloroethane	ND	10	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethene	ND	10	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	10	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	10	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	10	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	10	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	20	"	"	"	"	"	"	
1,1-Dichloroethane	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	20	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	10	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Bromochloromethane	ND	10	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	10	"	"	"	"	"	"	
1,1-Dichloropropene	ND	10	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.6	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	2.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	20	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	10	"	"	"	"	"	"	
Bromodichloromethane	ND	10	"	"	"	"	"	"	
Dibromomethane	ND	10	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	10	"	"	"	"	"	"	
Toluene	ND	20	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	10	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	
1,3-Dichloropropane	ND	10	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	10	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V023-B, P36cc (E107025-04) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									R-05
Ethylbenzene	ND	10	ug/l	1	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	10	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	10	"	"	"	"	"	"	
Styrene	ND	10	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	10	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	10	"	"	"	"	"	"	
n-Propylbenzene	ND	10	"	"	"	"	"	"	
Bromobenzene	ND	10	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	10	"	"	"	"	"	"	
2-Chlorotoluene	ND	10	"	"	"	"	"	"	
4-Chlorotoluene	ND	10	"	"	"	"	"	"	
tert-Butylbenzene	ND	10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	10	"	"	"	"	"	"	
sec-Butylbenzene	ND	10	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
n-Butylbenzene	ND	10	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	100	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	10	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	100	"	"	"	"	"	"	
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Surrogate: Dibromofluoromethane		91.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		96.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V024-A, P21cc (E107025-05) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V024-A, P21cc (E107025-05) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		89.1 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V006-A, P21cc (E107025-06) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V006-A, P21cc (E107025-06) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		87.4 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		92.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V006-B, P36cc (E107025-07) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V006-B, P36cc (E107025-07) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		86.6 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		93.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	75-125		"	"	"	"	



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Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-A, P333cc (E107025-08) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-A, P333cc (E107025-08) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		86.6 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		93.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-B, P348cc (E107025-09) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-B, P348cc (E107025-09) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		94.3 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		92.7 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-B Dup, P398cc (E107025-10) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-B Dup, P398cc (E107025-10) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		85.8 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		94.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V004-A, P333cc (E107025-11) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V004-A, P333cc (E107025-11) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		95.3 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Project: MX070811-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V004-B, P348cc (E107025-12) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V004-B, P348cc (E107025-12) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		94.3 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		91.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V020-A, P21cc (E107029-01) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	0.33	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V020-A, P21cc (E107029-01) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		94.1 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V010-A, P21cc (E107029-02) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V010-A, P21cc (E107029-02) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		96.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		90.8 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V010-B, P36cc (E107029-03) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V010-B, P36cc (E107029-03) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		87.7 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		90.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V009-A, P21cc (E107029-04) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V009-A, P21cc (E107029-04) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		94.2 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		92.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V009-B, P36cc (E107029-05) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V009-B, P36cc (E107029-05) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		94.7 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		95.5 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V008-A, P21cc (E107029-06) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.40	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	5.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	5.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.80	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V008-A, P21cc (E107029-06) Vapor									R-05
Ethylbenzene	ND	5.0	ug/l	0.5	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Bromobenzene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	50	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		95.3 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		95.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	75-125		"	"	"	"	



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Project: MX070811-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V008-B, P36cc (E107029-07) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	1	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	10	"	"	"	"	"	"	
Chloromethane	ND	10	"	"	"	"	"	"	
Vinyl chloride	ND	0.80	"	"	"	"	"	"	
Bromomethane	ND	10	"	"	"	"	"	"	
Chloroethane	ND	10	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	10	"	"	"	"	"	"	
1,1-Dichloroethene	ND	10	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	10	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	10	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	10	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	10	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	20	"	"	"	"	"	"	
1,1-Dichloroethane	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	20	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	10	"	"	"	"	"	"	
Chloroform	ND	2.0	"	"	"	"	"	"	
Bromochloromethane	ND	10	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	10	"	"	"	"	"	"	
1,1-Dichloropropene	ND	10	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.6	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	2.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	20	"	"	"	"	"	"	
Benzene	ND	2.0	"	"	"	"	"	"	
Trichloroethene	ND	2.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	10	"	"	"	"	"	"	
Bromodichloromethane	ND	10	"	"	"	"	"	"	
Dibromomethane	ND	10	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	10	"	"	"	"	"	"	
Toluene	ND	20	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	10	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10	"	"	"	"	"	"	
1,3-Dichloropropane	ND	10	"	"	"	"	"	"	
Tetrachloroethene	ND	2.0	"	"	"	"	"	"	
Dibromochloromethane	ND	10	"	"	"	"	"	"	
Chlorobenzene	ND	2.0	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V008-B, P36cc (E107029-07) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									R-05
Ethylbenzene	ND	10	ug/l	1	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	10	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	10	"	"	"	"	"	"	
Styrene	ND	10	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	10	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	10	"	"	"	"	"	"	
n-Propylbenzene	ND	10	"	"	"	"	"	"	
Bromobenzene	ND	10	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	10	"	"	"	"	"	"	
2-Chlorotoluene	ND	10	"	"	"	"	"	"	
4-Chlorotoluene	ND	10	"	"	"	"	"	"	
tert-Butylbenzene	ND	10	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	10	"	"	"	"	"	"	
sec-Butylbenzene	ND	10	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
n-Butylbenzene	ND	10	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	100	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	10	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Naphthalene	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	10	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	100	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		91.9 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		96.7 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V007-A, P21cc (E107029-08) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V007-A, P21cc (E107029-08) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		86.7 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		93.5 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V007-B, P36cc (E107029-09) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V007-B, P36cc (E107029-09) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		96.6 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		94.2 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V007-B Dup, P86cc (E107029-10) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V007-B Dup, P86cc (E107029-10) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		79.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		79.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V003-A, P21cc (E107035-01) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V003-A, P21cc (E107035-01) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		97.7 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		93.9 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V003-B, P36cc (E107035-02) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V003-B, P36cc (E107035-02) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		96.1 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		95.8 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	75-125		"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V002-A, P21cc (E107035-03) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V002-A, P21cc (E107035-03) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		99.4 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		96.0 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V002-B, P36cc (E107035-04) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V002-B, P36cc (E107035-04) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		95.5 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.6 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V030-A, P21cc (E107035-05) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V030-A, P21cc (E107035-05) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Ethylbenzene	ND	0.50	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		95.4 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		98.4 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V030-B, P36cc (E107035-06) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V030-B, P36cc (E107035-06) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									R-05
Ethylbenzene	ND	2.0	ug/l	0.2	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
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Surrogate: Dibromofluoromethane		95.2 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		101 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V030-B Dup, P86cc (E107035-07) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V030-B Dup, P86cc (E107035-07) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									R-05
Ethylbenzene	ND	2.0	ug/l	0.2	EG11301	13-Jul-11	13-Jul-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		93.8 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		97.1 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	75-125		"	"	"	"	



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 Project Manager: Mr. Jeremy Squire

Reported:
 21-Jul-11 11:06

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V005-A, P21cc (E107025-01) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	340	200	ug/l	0.5	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V005-B, P36cc (E107025-02) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	2900	800	ug/l	2	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V023-A, P21cc (E107025-03) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.2	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V023-B, P36cc (E107025-04) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	1100	400	ug/l	1	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V024-A, P21cc (E107025-05) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V006-A, P21cc (E107025-06) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V006-B, P36cc (E107025-07) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V022-A, P333cc (E107025-08) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V022-B, P348cc (E107025-09) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	



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Project: MX070811-SB2
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Project Manager: Mr. Jeremy Squire

Reported:
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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-B Dup, P398cc (E107025-10) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V004-A, P333cc (E107025-11) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V004-B, P348cc (E107025-12) Vapor Sampled: 11-Jul-11 Received: 11-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11106	11-Jul-11	11-Jul-11	DHS LUFT/8260B	
OS-V020-A, P21cc (E107029-01) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V010-A, P21cc (E107029-02) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V010-B, P36cc (E107029-03) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V009-A, P21cc (E107029-04) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V009-B, P36cc (E107029-05) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V008-A, P21cc (E107029-06) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	1900	200	ug/l	0.5	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	



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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V008-B, P36cc (E107029-07) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	6000	400	ug/l	1	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V007-A, P21cc (E107029-08) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V007-B, P36cc (E107029-09) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V007-B Dup, P86cc (E107029-10) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11202	12-Jul-11	12-Jul-11	DHS LUFT/8260B	
OS-V003-A, P21cc (E107035-01) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	DHS LUFT/8260B	
OS-V003-B, P36cc (E107035-02) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	DHS LUFT/8260B	
OS-V002-A, P21cc (E107035-03) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	DHS LUFT/8260B	
OS-V002-B, P36cc (E107035-04) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	DHS LUFT/8260B	
OS-V030-A, P21cc (E107035-05) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EG11301	13-Jul-11	13-Jul-11	DHS LUFT/8260B	



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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V030-B, P36cc (E107035-06) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Gasoline (C5-C11)	1400	200	ug/l	0.2	EG11301	13-Jul-11	13-Jul-11	DHS LUFT/8260B	
OS-V030-B Dup, P86cc (E107035-07) Vapor Sampled: 13-Jul-11 Received: 13-Jul-11									
Gasoline (C5-C11)	1400	200	ug/l	0.2	EG11301	13-Jul-11	13-Jul-11	DHS LUFT/8260B	



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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11106 - EPA 5030

Blank (EG11106-BLK1)

Prepared & Analyzed: 11-Jul-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11106 - EPA 5030

Blank (EG11106-BLK1)

Prepared & Analyzed: 11-Jul-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane

2.63

"

2.50

105

75-125



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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11106 - EPA 5030

Blank (EG11106-BLK1)

Prepared & Analyzed: 11-Jul-11

Surrogate: 1,2-Dichloroethane-d4	2.87		ug/l	2.50		115	75-125			
Surrogate: 4-Bromofluorobenzene	2.63		"	2.50		105	75-125			

LCS (EG11106-BS1)

Prepared & Analyzed: 11-Jul-11

Dichlorodifluoromethane (F12)	2.77	0.50	ug/l	2.50		111	70-130			
Vinyl chloride	1.99	0.05	"	2.50		79.6	70-130			
Chloroethane	2.30	0.50	"	2.50		91.9	70-130			
Trichlorofluoromethane (F11)	1.90	0.50	"	2.50		76.1	70-130			
1,1-Dichloroethene	2.66	0.50	"	2.50		106	70-130			
Methylene chloride (Dichloromethane)	2.50	0.50	"	2.50		100	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	2.48	0.50	"	2.50		99.1	70-130			
trans-1,2-Dichloroethene	2.44	0.50	"	2.50		97.7	70-130			
1,1-Dichloroethane	2.44	0.50	"	2.50		97.7	70-130			
cis-1,2-Dichloroethene	2.34	0.50	"	2.50		93.7	70-130			
Chloroform	2.45	0.10	"	2.50		98.0	70-130			
1,1,1-Trichloroethane	2.38	0.50	"	2.50		95.4	70-130			
Carbon tetrachloride	2.49	0.10	"	2.50		99.4	70-130			
1,2-Dichloroethane (EDC)	2.61	0.10	"	2.50		104	70-130			
Benzene	2.51	0.10	"	2.50		101	70-130			
Trichloroethene	2.66	0.10	"	2.50		106	70-130			
Toluene	2.39	1.0	"	2.50		95.6	70-130			
1,1,2-Trichloroethane	2.52	0.50	"	2.50		101	70-130			
Tetrachloroethene	2.59	0.10	"	2.50		104	70-130			
Ethylbenzene	2.66	0.50	"	2.50		106	70-130			
1,1,1,2-Tetrachloroethane	2.70	0.50	"	2.50		108	70-130			
m,p-Xylene	5.84	0.50	"	5.00		117	70-130			
o-Xylene	2.41	0.50	"	2.50		96.5	70-130			
1,1,2,2-Tetrachloroethane	2.75	0.50	"	2.50		110	70-130			

Surrogate: Dibromofluoromethane	2.46		"	2.50		98.3	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.49		"	2.50		99.5	75-125			
Surrogate: 4-Bromofluorobenzene	2.54		"	2.50		101	75-125			



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11202 - EPA 5030

Blank (EG11202-BLK1)

Prepared & Analyzed: 12-Jul-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11202 - EPA 5030

Blank (EG11202-BLK1)

Prepared & Analyzed: 12-Jul-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane

2.40

"

2.50

96.0

75-125



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Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11202 - EPA 5030

Blank (EG11202-BLK1)

Prepared & Analyzed: 12-Jul-11

Surrogate: 1,2-Dichloroethane-d4	2.26		ug/l	2.50		90.5	75-125			
Surrogate: 4-Bromofluorobenzene	2.65		"	2.50		106	75-125			

LCS (EG11202-BS1)

Prepared & Analyzed: 12-Jul-11

Dichlorodifluoromethane (F12)	2.49	0.50	ug/l	2.50		99.7	70-130			
Vinyl chloride	1.80	0.05	"	2.50		72.2	70-130			
Chloroethane	1.83	0.50	"	2.50		73.1	70-130			
Trichlorofluoromethane (F11)	1.67	0.50	"	2.50		67.0	70-130			QL-1L
1,1-Dichloroethene	2.48	0.50	"	2.50		99.4	70-130			
Methylene chloride (Dichloromethane)	2.18	0.50	"	2.50		87.4	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	2.36	0.50	"	2.50		94.4	70-130			
trans-1,2-Dichloroethene	2.27	0.50	"	2.50		90.8	70-130			
1,1-Dichloroethane	2.14	0.50	"	2.50		85.8	70-130			
cis-1,2-Dichloroethene	2.19	0.50	"	2.50		87.7	70-130			
Chloroform	2.21	0.10	"	2.50		88.2	70-130			
1,1,1-Trichloroethane	2.23	0.50	"	2.50		89.3	70-130			
Carbon tetrachloride	2.31	0.10	"	2.50		92.4	70-130			
1,2-Dichloroethane (EDC)	2.27	0.10	"	2.50		90.8	70-130			
Benzene	2.29	0.10	"	2.50		91.7	70-130			
Trichloroethene	2.34	0.10	"	2.50		93.5	70-130			
Toluene	2.21	1.0	"	2.50		88.3	70-130			
1,1,2-Trichloroethane	2.21	0.50	"	2.50		88.3	70-130			
Tetrachloroethene	2.63	0.10	"	2.50		105	70-130			
Ethylbenzene	2.72	0.50	"	2.50		109	70-130			
1,1,1,2-Tetrachloroethane	2.51	0.50	"	2.50		100	70-130			
m,p-Xylene	5.76	0.50	"	5.00		115	70-130			
o-Xylene	2.42	0.50	"	2.50		96.6	70-130			
1,1,2,2-Tetrachloroethane	2.40	0.50	"	2.50		96.0	70-130			
Surrogate: Dibromofluoromethane	2.36		"	2.50		94.5	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.25		"	2.50		90.0	75-125			
Surrogate: 4-Bromofluorobenzene	2.54		"	2.50		102	75-125			



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11301 - EPA 5030

Blank (EG11301-BLK1)

Prepared & Analyzed: 13-Jul-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11301 - EPA 5030

Blank (EG11301-BLK1)

Prepared & Analyzed: 13-Jul-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane

2.40

"

2.50

96.0

75-125



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Reported:
21-Jul-11 11:06

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11301 - EPA 5030

Blank (EG11301-BLK1)

Prepared & Analyzed: 13-Jul-11

Surrogate: 1,2-Dichloroethane-d4	2.25		ug/l	2.50		90.1	75-125			
Surrogate: 4-Bromofluorobenzene	2.57		"	2.50		103	75-125			

LCS (EG11301-BS1)

Prepared & Analyzed: 13-Jul-11

Dichlorodifluoromethane (F12)	2.83	0.50	ug/l	2.50		113	70-130			
Vinyl chloride	1.99	0.05	"	2.50		79.7	70-130			
Chloroethane	2.11	0.50	"	2.50		84.4	70-130			
Trichlorofluoromethane (F11)	1.98	0.50	"	2.50		79.4	70-130			
1,1-Dichloroethene	2.54	0.50	"	2.50		102	70-130			
Methylene chloride (Dichloromethane)	2.26	0.50	"	2.50		90.5	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	2.51	0.50	"	2.50		100	70-130			
trans-1,2-Dichloroethene	2.38	0.50	"	2.50		95.3	70-130			
1,1-Dichloroethane	2.32	0.50	"	2.50		92.7	70-130			
cis-1,2-Dichloroethene	2.26	0.50	"	2.50		90.3	70-130			
Chloroform	2.28	0.10	"	2.50		91.2	70-130			
1,1,1-Trichloroethane	2.29	0.50	"	2.50		91.7	70-130			
Carbon tetrachloride	2.41	0.10	"	2.50		96.3	70-130			
1,2-Dichloroethane (EDC)	2.27	0.10	"	2.50		91.0	70-130			
Benzene	2.34	0.10	"	2.50		93.4	70-130			
Trichloroethene	2.35	0.10	"	2.50		93.9	70-130			
Toluene	2.11	1.0	"	2.50		84.2	70-130			
1,1,2-Trichloroethane	2.13	0.50	"	2.50		85.0	70-130			
Tetrachloroethene	2.53	0.10	"	2.50		101	70-130			
Ethylbenzene	2.43	0.50	"	2.50		97.1	70-130			
1,1,1,2-Tetrachloroethane	2.37	0.50	"	2.50		94.9	70-130			
m,p-Xylene	5.40	0.50	"	5.00		108	70-130			
o-Xylene	2.21	0.50	"	2.50		88.4	70-130			
1,1,2,2-Tetrachloroethane	2.24	0.50	"	2.50		89.5	70-130			
Surrogate: Dibromofluoromethane	2.33		"	2.50		93.1	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.38		"	2.50		95.2	75-125			
Surrogate: 4-Bromofluorobenzene	2.57		"	2.50		103	75-125			



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Project: MX070811-SB2
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

TPH by MS - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11106 - EPA 5030

Blank (EG11106-BLK1)

Prepared & Analyzed: 11-Jul-11

Gasoline (C5-C11)	ND	200	ug/l
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Batch EG11202 - EPA 5030

Blank (EG11202-BLK1)

Prepared & Analyzed: 12-Jul-11

Gasoline (C5-C11)	ND	200	ug/l
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Batch EG11301 - EPA 5030

Blank (EG11301-BLK1)

Prepared & Analyzed: 13-Jul-11

Gasoline (C5-C11)	ND	200	ug/l
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Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:06

Notes and Definitions

R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
QL-1L	The LCS and/or LCSD recoveries fell below the established control specifications for this analyte. Any result for this compound is qualified and should be considered biased low.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



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Reported:
21-Jul-11 11:06

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS

Certificate# 2742, 2745, & 2741 approved for LUFT

Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.



Mobile
Geochemistry
Inc.

Chain of Custody Record

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☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 7/11/11
H&P Project # MX070811-46-SB2
Outside Lab SB2 on site 7/11/11

Client: Murex Environmental Inc. Collector: Dave Pride Page: 1 of 2
Address: 2640 Walnut Ave., Unit F Client Project # 1003-001-200
Tustin, CA 92780 Location: 12345 Lakeland Rd. Santa Fe Springs, CA
Email: jeremysquire@murexenv.com; francesosic@murexenv.com Phone: (714) 508-0800 Fax: _____ Turn around time: on site

Geotracker EDF: Yes ☒ No ☐

Global ID: SL372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°C

Special Instructions: Resampled 05-V024-A @ 1235

Lab Work Order # E107025 EG11106

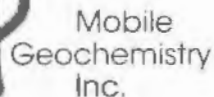
Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B	8015M TPH	418.1 TRPH	VOC's: Full List	VOC's: Short List/DTSC	VOC's: SAM, 8260B	Naphthalene	Oxygenates	TPHV gas	Ketones	Other	Leak Check Compound	Methane	Fixed Gases
05-V005-A	05-V005	21cc	1021	7/11/11	Vapor	Glass Syringe	1					<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
05-V005-B	05-V005	36cc	1029				1															
05-V023-A	05-V023	21cc	1108				1															
05-V023-B	05-V023	36cc	1127				1															
05-V024-A	05-V024	21cc	1141				1															
05-V006-A	05-V006	21cc	1211				1															
05-V006-B	05-V006	36cc	1220				1															
05-V022-A	05-V022	333cc	1240				1															
05-V022-B	05-V022	348cc	1403				1															
05-V022-B Dup	05-V022	398cc	1404				1															

Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
<u>Franc Sosic</u>	<u>MUREX ENV.</u>	<u>Dave Pride</u>	<u>H&P</u>	<u>7/11/11</u>	<u>1600</u>
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back

Sample disposal instruction:

☐ Disposal ☐ Return to client ☐ Pickup



Date: 7/11/11
H&P Project # MX070811-5B2
Outside Lab: _____

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Client:	Murex Environmental, Inc.	Collector:	Dave Pride	Page:	2	of	2
Address:	2640 Walnut Ave., Unit F Tustin, CA 92780	Client Project #	1003-001-200	Project Contact:	Jaromy R. Squire		
		Location:	12345 Lakeland Rd.		Santa Fe Springs, CA		
Email:	jsquire@murexenv.com; francesco@murexenv.com	Phone:	(714) 508-0800	Fax:		Turn around time:	on site

Geotracker EDF: Yes ☒ No ☐

Global ID: 5L372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ NoSeal Intact: ☐ Yes ☐ No ☒ N/ACold: ☐ Yes ☐ No ☒ N/A

Temperature: 20°C

Special Instructions:

Lab Work Order # E107025

[illegible]

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back

Sample disposal instruction:

☐ Disposal☐ Return to client☐ Pickup



Mobile
Geochemistry
Inc.

Chain of Custody Record

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☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 7/12/11
H&P Project # MX070811-5B2
Outside Lab Day 2

Client: Murex Environmental, Inc. Collector: Dave Pride Page: 1 of 1
Address: 2640 Walnut Ave. Unit F Client Project # 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA 92780 Location: 12345 Lakeland Rd. Santa Fe Springs, CA
Email: jeremy.squire@murexenv.com, frances.sisk@murexenv.com Phone: (714) 508-0800 Fax: _____ Turn around time: on site

Geotracker EDF: Yes ☒ No ☐
Global ID: SL372492442
Excel EDD: Yes ☐ No ☐
Sample Receipt
Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 30°C

Special Instructions: Resampled 05-U007-A @ 1555, Resampled 05-U007-B @ 1503, Resample Dup @ 1504

Lab Work Order # E107029 EG112-02

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B	8015M TPH	418.1 TRPH	VOC's: Full List	VOC's: Short List/DTSC	VOC's: SAM, B260B	Naphthalene	Oxygenates	TPH gas	Ketones	Other	Leak Check Compound	Methane	Fixed Gases
									<input type="checkbox"/> BTEX/OXY	<input type="checkbox"/> TPH gas	<input type="checkbox"/> ext	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> SAM A	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> TO-15	<input type="checkbox"/> 1,1 DFA	<input type="checkbox"/> OTHER	<input type="checkbox"/> N2
05-U020-A	05-U020	21cc	0942	7/12/11	Vapor	Glass Syringe	1					<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
05-U010-A	05-U010	21cc	1135				1															
05-U010-B	05-U010	36cc	1204				1															
05-U009-A	05-U009	21cc	1236				1															
05-U009-B	05-U009	36cc	1247				1															
05-U008-A	05-U008	21cc	1319				1															
05-U008-B	05-U008	36cc	1332				1															
05-U007-A	05-U007	21cc	1353				1															
05-U007-B	05-U007	36cc	1407				1															
05-U007-B Dup	05-U007	86cc	1408				1															

Relinquished by: (Signature) Frane Sisk (company) MUREX ENV. Received by: (Signature) Dave Pride (company) H&P Date: 7/12/11 Time: 1600
Relinquished by: (Signature) _____ (company) _____ Received by: (Signature) _____ (company) _____ Date: _____ Time: _____
Relinquished by: (Signature) _____ (company) _____ Received by: (Signature) _____ (company) _____ Date: _____ Time: _____

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction:

☐ Disposal

☐ Return to client

☐ Pickup



Mobile
Geochemistry
Inc.

Chain of Custody Record

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 7/13/11
H&P Project # MX070811-SB2 Day 3
Outside Lab: _____

Client: Murex Environmental, Inc. Collector: Dave Pride Page: 1 of 1
Address: 2640 Walnut Ave., Unit F Client Project # 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA 92780 Location: 12345 Lakeland Rd. Santa Fe Springs, CA
Email: jeremy.squire@murexenv.com; frances.sosic@murexenv.com Phone: (714) 508-0800 Fax: _____ Turn around time: onsite

Geotracker EDF: Yes ☒ No ☐

Global ID: SL372492442

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°C

Special Instructions:

Lab Work Order # E107035 EG11301

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B	8015M TPH	418.1 TRPH	VOC's Full List	VOC's: Short List/DTSC	VOC's: SAM, 8260B	Naphthalene	Oxygenates	TPHv gas	Ketones	Other	Leak Check Compound	Methane	Fixed Gases
								<input type="checkbox"/> BTEX/OXY	<input type="checkbox"/> TPH gas	<input type="checkbox"/> g	<input type="checkbox"/> ext	<input type="checkbox"/> TO-15	<input type="checkbox"/> 8260B	<input type="checkbox"/> 8260B	<input type="checkbox"/> TO-15	<input type="checkbox"/> 8260B	<input type="checkbox"/> TO-15	<input type="checkbox"/> 8260B	<input type="checkbox"/> TO-15	<input type="checkbox"/> 8260B	<input type="checkbox"/> TO-15	<input type="checkbox"/> CO2
																				<input checked="" type="checkbox"/> 1,1 DFA	<input type="checkbox"/> OTHER	<input type="checkbox"/> N2
05-V003-A	05-V003	2lcc	0933	7/13/11	Vapor	Glass Syringe	1					X				X	X			X		
05-V003-B	05-V003	3bcc	0954				1															
05-V002-A	05-V002	2lcc	1023				1															
05-V002-B	05-V002	3bcc	1032				1															
05-V030-A	05-V030	2lcc	1108				1															
05-V030-B	05-V030	3bcc	1135				1															
05-V030-B Dup	05-V030	8bcc	1136				1															

Relinquished by: (Signature) <u>Frane Sosic</u> (company) <u>MUREX ENV.</u>	Received by: (Signature) <u>Dave Pride</u> (company) <u>H&P</u>	Date: <u>7/13/11</u>	Time: <u>1330</u>
Relinquished by: (Signature) _____ (company) _____	Received by: (Signature) _____ (company) _____	Date: _____	Time: _____
Relinquished by: (Signature) _____ (company) _____	Received by: (Signature) _____ (company) _____	Date: _____	Time: _____

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction:

☐ Disposal ☐ Return to client ☐ Pickup



Vapor Sampling with Mobile Lab (Syringe*)

Site Address: 12345 Lake Land Rd. Santa Fe Springs, CA Date: 7/11/11
 Company: Murex Environmental H&P Project #: MX070811-L6 Arrival Time: 0800
 Field Rep(s): Frank Saric H&P Rep(s): Dave Pride / Dave Petryshin Departure Time: 1600

			Probe Specifications					Sampling Information				Field Notes:
Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)	Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓=Pass)	Probe Pressure (" Hg)	
1 OS-V005-A	SU0014	1021	5	7	5/8	1.5	12	21	~200	✓	No Vac.	purge tubing only
2 OS-V005-B	SU0015	1029	10	12	5/8	1.5	12	36	~200	✓	No Vac.	purge tubing only
3 OS-V023-A	SU0016	1108	5	7	5/8	1.5	12	21	~200	✓	No Vac.	purge tubing only
4 OS-V023-B	SU0017	1127	10	12	5/8	1.5	12	36	~200	✓	No Vac.	purge tubing only
5 OS-V024-A	SU0018	1141	5	7	5/8	1.5	12	21	~200	✓	No Vac.	purge tubing only
6 OS-V006-A	SU0019	1211	5	7	5/8	1.5	12	21	~200	✓	No Vac.	purge tubing only
7 OS-V006-B	SU0014	1220	10	12	5/8	1.5	12	36	~200	✓	No Vac.	purge tubing only
8 OS-V022-A	SU0015	1240	5	7	5/8	1.5	12	333	~200	✓	No Vac.	
9 OS-V022-B	SU0016	1403	10	12	5/8	1.5	12	348	~200	✓	No Vac.	
10 OS-V022-B Dup	SU0017	1404	10	12	5/8	1.5	12	398	~200	✓	No Vac.	
11 OS-V004-A	SU0018	1439	5	7	5/8	1.5	12	333	~200	✓	No Vac.	
12 OS-V004-B	SU0019	1503	10	12	5/8	1.5	12	348	~200	✓	No Vac.	
13												
14												
15												

Purge Volume Test (PVT) Information			
PVT performed on Probe ID:			
Tubing:	Length:	Diameter:	1 Volume:
Sand Pack (if included in purge volume calculation):	Height:	Diameter:	1 Volume:
PVT Increments:	PV =	PV =	PV =
PV Amount Selected:	3 PV		
Selected by: Murex Environmental			

Leak Check Information	
Leak Check Compound:	<input checked="" type="checkbox"/> 1,1-DFA <input type="checkbox"/> 1,1,1,2-TFA <input type="checkbox"/> IPA <input type="checkbox"/> Other
Procedure:	Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs):
 Client Signature:

(Signature)



Vapor Sampling with Mobile Lab (Syringe*)

Site Address: 12345 Lakeland Rd. Santa Fe Springs, CA

Date: 7/12/11

Company: MURKX Environmental H&P Project #: MX070811-SE2 Day 2

Arrival Time: 0750

Field Rep(s): Frank Soria

H&P Rep(s): Dave Price / Dave Petryshin

Departure Time:

Not needed
on 7/12/11

			Probe Specifications					Sampling Information				Field Notes:
Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)	Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓ = Pass)	Probe Pressure (" Hg)	
1 DS-11020-A	SU0014	0942	5	7	5/8	1.5	12	21cc	~200	✓	Vac=3"	purge tubing only
2 DS-11020-B	SU0015	0949	10	12	5/8	1.5	12	36cc	~200	✓	Vac=5"	purge tubing only
3 DS-11010-A	SU0016	1135	5	7	5/8	1.5	12	21cc	~200	✓	No vac.	purge tubing only
4 DS-11010-B	SU0017	1204	10	12	5/8	1.5	12	36cc	~200	✓	No vac.	purge tubing only
5 DS-11009-A	SU0018	1236	5	7	5/8	1.5	12	21cc	~200	✓	No vac.	purge tubing only
6 DS-11009-B	SU0019	1247	10	12	5/8	1.5	12	36cc	~200	✓	No vac.	purge tubing only
7 DS-11008-A	SU0014	1314	5	7	5/8	1.5	12	21cc	~200	✓	No vac.	purge tubing only
8 DS-11008-B	SU0015	1332	10	12	5/8	1.5	12	36cc	~200	✓	No vac.	purge tubing only
9 DS-11007-A	SU0016	1353	5	7	5/8	1.5	12	21cc	~200	✓	No vac.	purge tubing only
10 DS-11007-B	SU0017	1407	10	12	5/8	1.5	12	36cc	~200	✓	No vac.	purge tubing only
11 DS-11007-E	SU0018	1408	10	12	5/8	1.5	12	86cc	~200	✓	No vac.	purge tubing only
12												
13												
14												
15												

Purge Volume Test (PVT) Information			
PVT performed on Probe ID:			
Tubing:	Length:	Diameter:	Volume:
Sand Pack (if included in purge volume calculation):	Height:	Diameter:	Volume:
PVT Increments:	PV =	PV =	PV =
PV Amount Selected:	3 PV		

Selected by MURKX Environmental

Leak Check Information	
Leak Check Compound:	<input checked="" type="checkbox"/> 1,1-DFA <input type="checkbox"/> 1,1,1,2-TFA <input type="checkbox"/> IPA <input type="checkbox"/> Other
Procedure:	Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs):

Client Signature:



Vapor Sampling with Mobile Lab (Syringe*)

Site Address: 12345 Lakeland Rd. Santa Fe Springs, CA Date: 7/13/11
 Company: Murex Environmental H&P Project #: MX070815-SB2 Day 3 Arrival Time: 0750
 Field Rep(s): Frank Sasic H&P Rep(s): Dave Price Departure Time: 1300

			Probe Specifications					Sampling Information				Field Notes:
Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)	Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓=Pass)	Probe Pressure ("Hg)	
1 OS-V003-A	SU0014	0933	5	7	3/8	1.5	12	21cc	~200	✓	No Vac.	purge tube only
2 OS-V003-B	SU0015	0954	10	12	3/8	1.5	12	36cc	~200	✓	No Vac.	purge tubing only
3 OS-V002-A	SU0016	1023	5	7	3/8	1.5	12	21cc	~200	✓	No Vac.	purge tubing only
4 OS-V002-B	SU0017	1032	10	12	3/8	1.5	12	36cc	~200	✓	No Vac.	purge tubing only
5 OS-V030-A	SU0018	1108	5	7	3/8	1.5	12	21cc	~200	✓	No Vac.	purge tubing only
6 OS-V030-B	SU0019	1135	10	12	3/8	1.5	12	36cc	~200	✓	No Vac.	purge tubing only
7 OS-V030-B Dup	SU0014	1136	10	12	3/8	1.5	12	86cc	~200	✓	No Vac.	purge tubing only
8												
9												
10												
11												
12												
13												
14												
15												

Purge Volume Test (PVT) Information			
PVT performed on Probe ID:			
Tubing:	Length:	Diameter:	1 Volume:
Sand Pack (if included in purge volume calculation):	Height:	Diameter:	1 Volume:
PVT Increments:	__ PV =	__ PV =	__ PV =
PV Amount Selected:	3 PV		
	Selected by: Murex Environmental		

Leak Check Information	
Leak Check Compound:	<input checked="" type="checkbox"/> 1,1-DFA <input type="checkbox"/> 1,1,1,2-TFA <input type="checkbox"/> IPA <input type="checkbox"/> Other
Procedure:	Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs): _____
 Client Signature: _____



Mobile
Geochemistry
Inc.

Mr. Jeremy Squire
Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

21 July 2011



H&P Project: MX071411-11
Client Project: 1003-001-200 / Fmr CENCO Refinery

Dear Mr. Jeremy Squire:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 12-Jul-11 which were analyzed in accordance with the attached Chain of Custody record(s).

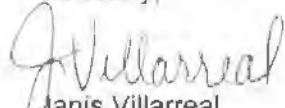
The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

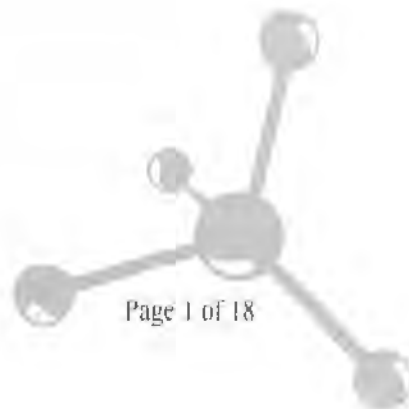
Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,


Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845





2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-V042-B	E107041-01	Vapor	27-Jun-11	12-Jul-11
OS-V033-B	E107041-02	Vapor	29-Jun-11	12-Jul-11
OS-V022-A	E107041-03	Vapor	11-Jul-11	12-Jul-11
OS-V001-A	E107041-04	Vapor	12-Jul-11	12-Jul-11
OS-V010-A	E107041-05	Vapor	12-Jul-11	12-Jul-11



2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-B (E107041-01) Vapor Sampled: 27-Jun-11 Received: 12-Jul-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	100	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
Dichlorodifluoromethane (F12)	ND	500	ug/m3	"	"	"	"	"	
Chloromethane	ND	210	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	710	"	"	"	"	"	"	
Vinyl chloride	ND	260	"	"	"	"	"	"	
Bromomethane	ND	1600	"	"	"	"	"	"	
Chloroethane	ND	800	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	570	"	"	"	"	"	"	
Acetone	ND	2400	"	"	"	"	"	"	
1,1-Dichloroethene	ND	400	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	610	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	770	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	350	"	"	"	"	"	"	
Carbon disulfide	ND	630	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	800	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	370	"	"	"	"	"	"	
1,1-Dichloroethane	ND	410	"	"	"	"	"	"	
2-Butanone (MEK)	ND	3000	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	400	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	420	"	"	"	"	"	"	
Chloroform	ND	500	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	420	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	550	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	410	"	"	"	"	"	"	
Benzene	ND	320	"	"	"	"	"	"	
Carbon tetrachloride	ND	640	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	420	"	"	"	"	"	"	
Trichloroethene	ND	550	"	"	"	"	"	"	
1,2-Dichloropropane	ND	940	"	"	"	"	"	"	
Bromodichloromethane	ND	680	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	460	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	830	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	460	"	"	"	"	"	"	
Toluene	ND	380	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	550	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	830	"	"	"	"	"	"	
Dibromochloromethane	ND	860	"	"	"	"	"	"	
Tetrachloroethene	ND	690	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-B (E107041-01) Vapor Sampled: 27-Jun-11 Received: 12-Jul-11									R-05
1,2-Dibromoethane (EDB)	ND	780	ug/m3	100	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
1,1,1,2-Tetrachloroethane	ND	700	"	"	"	"	"	"	
Chlorobenzene	ND	470	"	"	"	"	"	"	
Ethylbenzene	ND	440	"	"	"	"	"	"	
m,p-Xylene	ND	880	"	"	"	"	"	"	
Styrene	ND	430	"	"	"	"	"	"	
o-Xylene	ND	440	"	"	"	"	"	"	
Bromoform	ND	1000	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	700	"	"	"	"	"	"	
4-Ethyltoluene	ND	500	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	500	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1200	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	750	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1100	"	"	"	"	"	"	
<hr/>									
Surrogate: 1,2-Dichloroethane-d4		92.7 %	76-134		"	"	"	"	
Surrogate: Toluene-d8		111 %	78-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.7 %	77-127		"	"	"	"	
<hr/>									
OS-V033-B (E107041-02) Vapor Sampled: 29-Jun-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	1000	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
Dichlorodifluoromethane (F12)	ND	5000	ug/m3	"	"	"	"	"	
Chloromethane	ND	2100	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7100	"	"	"	"	"	"	
Vinyl chloride	ND	2600	"	"	"	"	"	"	
Bromomethane	ND	16000	"	"	"	"	"	"	
Chloroethane	ND	8000	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5700	"	"	"	"	"	"	
Acetone	ND	24000	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4000	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6100	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7700	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3500	"	"	"	"	"	"	
Carbon disulfide	ND	6300	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8000	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V033-B (E107041-02) Vapor Sampled: 29-Jun-11 Received: 12-Jul-11									
Methyl tertiary-butyl ether (MTBE)	ND	3700	ug/m3	1000	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
1,1-Dichloroethane	ND	4100	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30000	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4000	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4200	"	"	"	"	"	"	
Chloroform	ND	5000	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4200	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5500	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4100	"	"	"	"	"	"	
Benzene	200000	3200	"	"	"	"	"	"	
Carbon tetrachloride	ND	6400	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4200	"	"	"	"	"	"	
Trichloroethene	ND	5500	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9400	"	"	"	"	"	"	
Bromodichloromethane	ND	6800	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4600	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8300	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4600	"	"	"	"	"	"	
Toluene	7600	3800	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5500	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8300	"	"	"	"	"	"	
Dibromochloromethane	ND	8600	"	"	"	"	"	"	
Tetrachloroethene	ND	6900	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7800	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7000	"	"	"	"	"	"	
Chlorobenzene	ND	4700	"	"	"	"	"	"	
Ethylbenzene	ND	4400	"	"	"	"	"	"	
m,p-Xylene	ND	8800	"	"	"	"	"	"	
Styrene	ND	4300	"	"	"	"	"	"	
o-Xylene	ND	4400	"	"	"	"	"	"	
Bromoform	ND	10000	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7000	"	"	"	"	"	"	
4-Ethyltoluene	ND	5000	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5000	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12000	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V033-B (E107041-02) Vapor Sampled: 29-Jun-11 Received: 12-Jul-11									
1,2,4-Trichlorobenzene	ND	7500	ug/m3	1000	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
Hexachlorobutadiene	ND	11000	"	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		90.3 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87.3 %	77-127		"	"	"	"	
OS-V022-A (E107041-03) Vapor Sampled: 11-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	"	"	"	"	"	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	440	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	250	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	120	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	56	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V022-A (E107041-03) Vapor Sampled: 11-Jul-11 Received: 12-Jul-11									
cis-1,3-Dichloropropene	ND	4.6	ug/m3	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
4-Methyl-2-pentanone (MIBK)	18	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	270	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	38	4.4	"	"	"	"	"	"	
m,p-Xylene	130	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	46	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	7.6	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	10	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	40	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
<hr/>									
Surrogate: 1,2-Dichloroethane-d4		92.1 %	76-134		"	"	"	"	
Surrogate: Toluene-d8		107 %	78-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	77-127		"	"	"	"	



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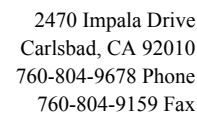
Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V001-A (E107041-04) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	"	"	"	"	"	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	28	24	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	3.5	"	"	"	"	"	"	
Carbon disulfide	ND	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	4.4	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	5.6	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	ND	6.9	"	"	"	"	"	"	



Reported:
21-Jul-11 11:41

H&P Mobile Geochemistry, Inc.Page 9 of 18



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Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V010-A (E107041-05) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
Methyl tertiary-butyl ether (MTBE)	ND	3.7	ug/m3	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	ND	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	3.4	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	8.1	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	7.5	6.9	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	7.8	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	4.4	4.4	"	"	"	"	"	"	
m,p-Xylene	15	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	6.9	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	12	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	



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Project: MX071411-11
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Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
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OS-V010-A (E107041-05) Vapor **Sampled: 12-Jul-11** **Received: 12-Jul-11**

1,2,4-Trichlorobenzene	ND	7.5	ug/m3	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	

<i>Surrogate: 1,2-Dichloroethane-d4</i>		95.7 %	76-134		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		100 %	78-125		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	77-127		"	"	"	"	



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Murex Environmental, Inc.
 2640 Walnut Avenue, Unit F
 Tustin, CA 92780

Project: MX071411-11
 Project Number: 1003-001-200 / Fmr CENCO Refinery
 Project Manager: Mr. Jeremy Squire

Reported:
 21-Jul-11 11:41

TPHv on Vapors by EPA Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V042-B (E107041-01) Vapor Sampled: 27-Jun-11 Received: 12-Jul-11									
TPHv (C5 - C11)	3400000	100000	ug/m3	1000	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
OS-V033-B (E107041-02) Vapor Sampled: 29-Jun-11 Received: 12-Jul-11									
TPHv (C5 - C11)	14000000	100000	ug/m3	1000	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
OS-V022-A (E107041-03) Vapor Sampled: 11-Jul-11 Received: 12-Jul-11									
TPHv (C5 - C11)	4500	100	ug/m3	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
OS-V001-A (E107041-04) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
TPHv (C5 - C11)	1200	100	ug/m3	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	
OS-V010-A (E107041-05) Vapor Sampled: 12-Jul-11 Received: 12-Jul-11									
TPHv (C5 - C11)	2300	100	ug/m3	1	EG11803	18-Jul-11	18-Jul-11	EPA TO-15	



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Tustin, CA 92780

Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11803 - TO-15

Blank (EG11803-BLK1)

Prepared & Analyzed: 18-Jul-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3
Chloromethane	ND	2.1	"
Dichlorotetrafluoroethane (F114)	ND	7.1	"
Vinyl chloride	ND	2.6	"
Bromomethane	ND	16	"
Chloroethane	ND	8.0	"
Trichlorofluoromethane (F11)	ND	5.7	"
Acetone	ND	24	"
1,1-Dichloroethene	ND	4.0	"
Tertiary-butyl alcohol (TBA)	ND	6.1	"
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"
Methylene chloride (Dichloromethane)	ND	3.5	"
Carbon disulfide	ND	6.3	"
trans-1,2-Dichloroethene	ND	8.0	"
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"
1,1-Dichloroethane	ND	4.1	"
2-Butanone (MEK)	ND	30	"
cis-1,2-Dichloroethene	ND	4.0	"
Diisopropyl ether (DIPE)	ND	4.2	"
Chloroform	ND	5.0	"
Ethyl tert-butyl ether (ETBE)	ND	4.2	"
1,1,1-Trichloroethane	ND	5.5	"
1,2-Dichloroethane (EDC)	ND	4.1	"
Benzene	ND	3.2	"
Carbon tetrachloride	ND	6.4	"
Tertiary-amyl methyl ether (TAME)	ND	4.2	"
Trichloroethene	ND	5.5	"
1,2-Dichloropropane	ND	9.4	"
Bromodichloromethane	ND	6.8	"
cis-1,3-Dichloropropene	ND	4.6	"
4-Methyl-2-pentanone (MIBK)	ND	8.3	"
trans-1,3-Dichloropropene	ND	4.6	"
Toluene	ND	3.8	"



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11803 - TO-15

Blank (EG11803-BLK1)

Prepared & Analyzed: 18-Jul-11

1,1,2-Trichloroethane	ND	5.5	ug/m3
2-Hexanone (MBK)	ND	8.3	"
Dibromochloromethane	ND	8.6	"
Tetrachloroethene	ND	6.9	"
1,2-Dibromoethane (EDB)	ND	7.8	"
1,1,1,2-Tetrachloroethane	ND	7.0	"
Chlorobenzene	ND	4.7	"
Ethylbenzene	ND	4.4	"
m,p-Xylene	ND	8.8	"
Styrene	ND	4.3	"
o-Xylene	ND	4.4	"
Bromoform	ND	10	"
1,1,2,2-Tetrachloroethane	ND	7.0	"
4-Ethyltoluene	ND	5.0	"
1,3,5-Trimethylbenzene	ND	5.0	"
1,2,4-Trimethylbenzene	ND	5.0	"
1,3-Dichlorobenzene	ND	12	"
1,4-Dichlorobenzene	ND	12	"
1,2-Dichlorobenzene	ND	12	"
1,2,4-Trichlorobenzene	ND	7.5	"
Hexachlorobutadiene	ND	11	"

Surrogate: 1,2-Dichloroethane-d4	206	"	214	95.9	76-134
Surrogate: Toluene-d8	206	"	207	99.5	78-125
Surrogate: 4-Bromofluorobenzene	336	"	365	92.1	77-127

LCS (EG11803-BS1)

Prepared & Analyzed: 18-Jul-11

Dichlorodifluoromethane (F12)	83	5.0	ug/m3	101	82.2	65-135
Vinyl chloride	45	2.6	"	52.0	87.3	65-135
Chloroethane	34	8.0	"	53.6	62.7	65-135
Trichlorofluoromethane (F11)	93	5.7	"	113	82.0	65-135
1,1-Dichloroethene	64	4.0	"	80.8	79.3	65-135
1,1,2-Trichlorotrifluoroethane (F113)	140	7.7	"	155	87.2	65-135
Methylene chloride (Dichloromethane)	59	3.5	"	70.8	83.1	65-135

QL-1L



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Murex Environmental, Inc.
 2640 Walnut Avenue, Unit F
 Tustin, CA 92780

Project: MX071411-11
 Project Number: 1003-001-200 / Fmr CENCO Refinery
 Project Manager: Mr. Jeremy Squire

Reported:
 21-Jul-11 11:41

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11803 - TO-15

LCS (EG11803-BS1)

Prepared & Analyzed: 18-Jul-11

trans-1,2-Dichloroethene	64	8.0	ug/m3	80.8		78.9	65-135			
1,1-Dichloroethane	71	4.1	"	82.4		86.0	65-135			
cis-1,2-Dichloroethene	59	4.0	"	80.0		73.2	65-135			
Chloroform	87	5.0	"	99.2		87.7	65-135			
1,1,1-Trichloroethane	96	5.5	"	111		86.0	65-135			
1,2-Dichloroethane (EDC)	68	4.1	"	82.4		83.1	65-135			
Benzene	56	3.2	"	64.8		86.8	65-135			
Carbon tetrachloride	110	6.4	"	128		88.3	65-135			
Trichloroethene	100	5.5	"	110		91.2	65-135			
Toluene	69	3.8	"	76.8		89.4	65-135			
1,1,2-Trichloroethane	99	5.5	"	111		88.6	65-135			
Tetrachloroethene	120	6.9	"	138		85.5	65-135			
1,1,1,2-Tetrachloroethane	150	7.0	"	140		111	65-135			
Ethylbenzene	88	4.4	"	88.4		100	65-135			
m,p-Xylene	190	8.8	"	177		106	65-135			
o-Xylene	96	4.4	"	88.4		109	65-135			
1,1,2,2-Tetrachloroethane	170	7.0	"	140		123	65-135			

Surrogate: 1,2-Dichloroethane-d4	203		"	214		94.6	76-134			
Surrogate: Toluene-d8	201		"	207		97.1	78-125			
Surrogate: 4-Bromofluorobenzene	381		"	365		105	77-127			



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2640 Walnut Avenue, Unit F
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Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

TPHv on Vapors by EPA Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EG11803 - TO-15

Blank (EG11803-BLK1)

Prepared & Analyzed: 18-Jul-11

TPHv (C5 - C11)	ND	100	ug/m3							
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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Notes and Definitions

R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
QL-1L	The LCS and/or LCSD recoveries fell below the established control specifications for this analyte. Any result for this compound is qualified and should be considered biased low.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



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Project: MX071411-11
Project Number: 1003-001-200 / Fmr CENCO Refinery
Project Manager: Mr. Jeremy Squire

Reported:
21-Jul-11 11:41

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS

Certificate# 2742, 2745, & 2741 approved for LUFT

Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.



Mobile
Geochemistry
Inc.

Chain of Custody Record

☐ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☒ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 6/27/11
H&P Project # MX062711(-SB2)
WA Outside Lab: MX071411-11

Client: Morex Environmental Inc. Collector: D. Petryshin Page: 1 of 1
Address: 2640 Walnut Ave, Unit F Client Project # 1003-001-200 Project Contact: Jeremy Squire
Tustin, CA 92780 Location: 12345 Lakeland rd., Santa Fe Springs
Email: jeremysquire@morexenv.com Phone: 714-508-0800 Fax: _____ Turn around time: standard

Geotracker EDF: Yes ☐ No ☐

Global ID: _____

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: RT

Special Instructions:

Screen OS-V042-B + OS-V033-B before
Sampling (hot)

Lab Work Order # E107041

Sample Name	Container* Field Point Name	Bu Vol 8 Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B	8015M TPH	418.1 TRPH	VOC's: Full List	VOC's: Short List/DTSC	VOC's: SAM, 8260B	Naphthalene	Oxygenates	TPHV gas	Ketones	Other	Leak Check Compound	Methane	Fixed Gases	VAC#
OS-V042-B	026	748cc	1554	6/27/11	vapor	summa	1					X				X	X			X			-2.8
OS-V033-B	070	748cc	1604	6/29/11	I	I	1					X				X	X			X			-2.6
OS-V022-A	044	333cc	1422	7/11/11	I	I	1					X				X	X			X			-3.0
OS-V001-A	054	21cc	1126	7/12/11	I	I	1					X				X	X			X			-2.1
OS-V010-A	169	21cc	1215	7/12/11	I	I	1					X				X	X			X			-3.3

Relinquished by: (Signature) <u>F. Sasic</u> (company) <u>Morex Env.</u>	Received by: (Signature) <u>[Signature]</u> (company) <u>H&P</u>	Date: <u>7/12/11</u>	Time: <u>1230</u>
Relinquished by: (Signature) _____ (company) _____	Received by: (Signature) _____ (company) _____	Date: _____	Time: _____
Relinquished by: (Signature) _____ (company) _____	Received by: (Signature) _____ (company) _____	Date: _____	Time: _____

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction:

☐ Disposal ☐ Return to client ☐ Pickup



Mobile
Geochemistry
Inc.

Mr. Jeremy Squire
Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

26 September 2011



H&P Project: MX092011-L6
Client Project: 1003-001-200/ Fmr. Cenco Refinery

Dear Mr. Jeremy Squire:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 20-Sep-11 which were analyzed in accordance with the attached Chain of Custody record(s).

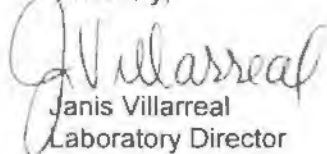
The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

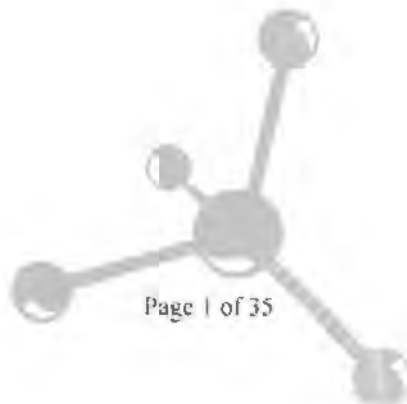
We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,


Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-V018-A, P333cc	E109092-01	Vapor	20-Sep-11	20-Sep-11
OS-V018-B, P348cc	E109092-02	Vapor	20-Sep-11	20-Sep-11
OS-V017-A, P333cc	E109092-03	Vapor	20-Sep-11	20-Sep-11
OS-V026-B, P348cc	E109092-04	Vapor	20-Sep-11	20-Sep-11
OS-V028-A, P333cc	E109092-05	Vapor	20-Sep-11	20-Sep-11
OS-V028-B, P348cc	E109092-06	Vapor	20-Sep-11	20-Sep-11
OS-V028-B-Dup, P398cc	E109092-07	Vapor	20-Sep-11	20-Sep-11
OS-V027-A, P333cc	E109092-08	Vapor	20-Sep-11	20-Sep-11
OS-V027-B, P348cc	E109092-09	Vapor	20-Sep-11	20-Sep-11
OS-V016-A, P333cc	E109092-10	Vapor	20-Sep-11	20-Sep-11
OS-V016-B, P348cc	E109092-11	Vapor	20-Sep-11	20-Sep-11
OS-V017-B, P348cc	E109092-12	Vapor	20-Sep-11	20-Sep-11



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V018-A, P333cc (E109092-01) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V018-A, P333cc (E109092-01) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

114 % 75-125

" " " "

Surrogate: 1,2-Dichloroethane-d4

118 % 75-125

" " " "

Surrogate: Toluene-d8

113 % 75-125

" " " "

Surrogate: 4-Bromofluorobenzene

96.1 % 75-125

" " " "



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V018-B, P348cc (E109092-02) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V018-B, P348cc (E109092-02) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane
Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

109 % 75-125 " " " "
110 % 75-125 " " " "
108 % 75-125 " " " "
96.5 % 75-125 " " " "



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V017-A, P333cc (E109092-03) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V017-A, P333cc (E109092-03) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

111 % 75-125

"

"

"

"

Surrogate: 1,2-Dichloroethane-d4

113 % 75-125

"

"

"

"

Surrogate: Toluene-d8

111 % 75-125

"

"

"

"

Surrogate: 4-Bromofluorobenzene

96.5 % 75-125

"

"

"

"



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Murex Environmental, Inc.
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V026-B, P348cc (E109092-04) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	0.13	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V026-B, P348cc (E109092-04) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		114 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		121 %	75-125		"	"	"	"	
Surrogate: Toluene-d8		110 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.4 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V028-A, P333cc (E109092-05) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
 2640 Walnut Avenue, Unit F
 Tustin, CA 92780

Project: MX092011-L6
 Project Number: 1003-001-200/ Fmr. Cenco Refinery
 Project Manager: Mr. Jeremy Squire

Reported:
 26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V028-A, P333cc (E109092-05) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	1.0	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane
 Surrogate: 1,2-Dichloroethane-d4
 Surrogate: Toluene-d8
 Surrogate: 4-Bromofluorobenzene

110 % 75-125 "
 115 % 75-125 "
 111 % 75-125 "
 91.9 % 75-125 "



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V028-B, P348cc (E109092-06) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V028-B, P348cc (E109092-06) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

114 % 75-125

" " " "

Surrogate: 1,2-Dichloroethane-d4

114 % 75-125

" " " "

Surrogate: Toluene-d8

111 % 75-125

" " " "

Surrogate: 4-Bromofluorobenzene

95.5 % 75-125

" " " "



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V028-B-Dup, P398cc (E109092-07) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V028-B-Dup, P398cc (E109092-07) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		111 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		115 %	75-125		"	"	"	"	
Surrogate: Toluene-d8		110 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.5 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V027-A, P333cc (E109092-08) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V027-A, P333cc (E109092-08) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									R-05
Ethylbenzene	ND	2.0	ug/l	0.2	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		112 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		117 %	75-125		"	"	"	"	
Surrogate: Toluene-d8		110 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V027-B, P348cc (E109092-09) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									R-05
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	2.0	"	"	"	"	"	"	
Chloromethane	ND	2.0	"	"	"	"	"	"	
Vinyl chloride	ND	0.16	"	"	"	"	"	"	
Bromomethane	ND	2.0	"	"	"	"	"	"	
Chloroethane	ND	2.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	2.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.0	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	2.0	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	2.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.0	"	"	"	"	"	"	
Chloroform	ND	0.40	"	"	"	"	"	"	
Bromochloromethane	ND	2.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.32	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.40	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Trichloroethene	ND	0.40	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Bromodichloromethane	ND	2.0	"	"	"	"	"	"	
Dibromomethane	ND	2.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	2.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	2.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.0	"	"	"	"	"	"	
Tetrachloroethene	ND	0.40	"	"	"	"	"	"	
Dibromochloromethane	ND	2.0	"	"	"	"	"	"	
Chlorobenzene	ND	0.40	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V027-B, P348cc (E109092-09) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									R-05
Ethylbenzene	ND	2.0	ug/l	0.2	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Styrene	ND	2.0	"	"	"	"	"	"	
Bromoform	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	2.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	2.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	2.0	"	"	"	"	"	"	
n-Propylbenzene	ND	2.0	"	"	"	"	"	"	
Bromobenzene	ND	2.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	2.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	2.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	20	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	0.40	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		110 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		109 %	75-125		"	"	"	"	
Surrogate: Toluene-d8		111 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.5 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V016-A, P333cc (E109092-10) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V016-A, P333cc (E109092-10) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

111 % 75-125

" " " "

Surrogate: 1,2-Dichloroethane-d4

110 % 75-125

" " " "

Surrogate: Toluene-d8

109 % 75-125

" " " "

Surrogate: 4-Bromofluorobenzene

95.8 % 75-125

" " " "



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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V016-B, P348cc (E109092-11) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	0.10	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V016-B, P348cc (E109092-11) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane

112 % 75-125

" " " "

Surrogate: 1,2-Dichloroethane-d4

113 % 75-125

" " " "

Surrogate: Toluene-d8

108 % 75-125

" " " "

Surrogate: 4-Bromofluorobenzene

96.8 % 75-125

" " " "



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Murex Environmental, Inc.
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V017-B, P348cc (E109092-12) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.04	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.08	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	



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Murex Environmental, Inc.
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V017-B, P348cc (E109092-12) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Ethylbenzene	ND	0.50	ug/l	0.04	E112006	20-Sep-11	20-Sep-11	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Styrene	ND	0.50	"	"	"	"	"	"	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
<hr/>									
Surrogate: Dibromofluoromethane		108 %	75-125		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		108 %	75-125		"	"	"	"	
Surrogate: Toluene-d8		110 %	75-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	75-125		"	"	"	"	



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Murex Environmental, Inc.
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Project: MX092011-L6
 Project Number: 1003-001-200/ Fmr. Cenco Refinery
 Project Manager: Mr. Jeremy Squire

Reported:
 26-Sep-11 13:07

TPH by MS

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V018-A, P333cc (E109092-01) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V018-B, P348cc (E109092-02) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V017-A, P333cc (E109092-03) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V026-B, P348cc (E109092-04) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V028-A, P333cc (E109092-05) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V028-B, P348cc (E109092-06) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V028-B-Dup, P398cc (E109092-07) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V027-A, P333cc (E109092-08) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.2	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V027-B, P348cc (E109092-09) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.2	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	



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Murex Environmental, Inc.
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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

TPH by MS

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-V016-A, P333cc (E109092-10) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V016-B, P348cc (E109092-11) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	
OS-V017-B, P348cc (E109092-12) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
Gasoline (C5-C11)	ND	200	ug/l	0.04	EI12006	20-Sep-11	20-Sep-11	DHS LUFT/8260B	



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Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EI12006 - EPA 5030

Blank (EI12006-BLK1)

Prepared & Analyzed: 20-Sep-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.04	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
Diisopropyl ether (DIPE)	ND	1.0	"
1,1-Dichloroethane	ND	0.50	"
Ethyl tert-butyl ether (ETBE)	ND	1.0	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.08	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Tertiary-amyl methyl ether (TAME)	ND	1.0	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"



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Project: MX092011-L6
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Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EI12006 - EPA 5030

Blank (EI12006-BLK1)

Prepared & Analyzed: 20-Sep-11

1,3-Dichloropropane	ND	0.50	ug/l
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"
Ethylbenzene	ND	0.50	"
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
Tertiary-butyl alcohol (TBA)	ND	5.0	"

Surrogate: Dibromofluoromethane 2.73 " 2.50 109 75-125



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Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EI12006 - EPA 5030

Blank (EI12006-BLK1)

Prepared & Analyzed: 20-Sep-11

Surrogate: 1,2-Dichloroethane-d4	2.91		ug/l	2.50		116	75-125			
Surrogate: Toluene-d8	2.74		"	2.50		110	75-125			
Surrogate: 4-Bromofluorobenzene	2.44		"	2.50		97.5	75-125			

LCS (EI12006-BS1)

Prepared & Analyzed: 20-Sep-11

Dichlorodifluoromethane (F12)	2.88	0.50	ug/l	2.50		115	70-130			
Vinyl chloride	2.95	0.04	"	2.50		118	70-130			
Chloroethane	3.03	0.50	"	2.50		121	70-130			
Trichlorofluoromethane (F11)	2.74	0.50	"	2.50		110	70-130			
1,1-Dichloroethene	3.09	0.50	"	2.50		124	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	3.04	0.50	"	2.50		121	70-130			
Methylene chloride (Dichloromethane)	2.62	0.50	"	2.50		105	70-130			
trans-1,2-Dichloroethene	2.88	0.50	"	2.50		115	70-130			
1,1-Dichloroethane	2.82	0.50	"	2.50		113	70-130			
cis-1,2-Dichloroethene	2.73	0.50	"	2.50		109	70-130			
Chloroform	2.70	0.10	"	2.50		108	70-130			
1,1,1-Trichloroethane	2.60	0.50	"	2.50		104	70-130			
Carbon tetrachloride	2.66	0.08	"	2.50		106	70-130			
1,2-Dichloroethane (EDC)	2.77	0.10	"	2.50		111	70-130			
Benzene	2.71	0.10	"	2.50		108	70-130			
Trichloroethene	2.67	0.10	"	2.50		107	70-130			
Toluene	2.74	1.0	"	2.50		110	70-130			
1,1,2-Trichloroethane	2.65	0.50	"	2.50		106	70-130			
Tetrachloroethene	2.69	0.10	"	2.50		107	70-130			
Ethylbenzene	2.85	0.50	"	2.50		114	70-130			
1,1,1,2-Tetrachloroethane	2.56	0.50	"	2.50		102	70-130			
m,p-Xylene	5.79	0.50	"	5.00		116	70-130			
o-Xylene	2.74	0.50	"	2.50		109	70-130			

Surrogate: Dibromofluoromethane	2.87		"	2.50		115	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.74		"	2.50		110	75-125			
Surrogate: Toluene-d8	2.76		"	2.50		110	75-125			
Surrogate: 4-Bromofluorobenzene	2.56		"	2.50		102	75-125			



2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EI12006 - EPA 5030



2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

TPH by MS - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EI12006 - EPA 5030

Blank (EI12006-BLK1)

Prepared & Analyzed: 20-Sep-11

Gasoline (C5-C11)	ND	200	ug/l
-------------------	----	-----	------



2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Notes and Definitions

R-05 The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference



2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092011-L6
Project Number: 1003-001-200/ Fmr. Cenco Refinery
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:07

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS

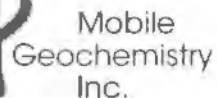
Certificate# 2742, 2745, & 2741 approved for LUFT

Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.



Date: 09/20/11
H&P Project # MX092011-L6
Outside Lab: _____

Client: Murex Env. Collector: Roberto Lopez Page: 1 of 2
Address: 2640 Walnut Ave. Unit F. Client Project # 1003-001-200 Project Contact: Jeremy R. Squire
Tustin, CA 92780 Location: 12345 Lakeland Rd, Santa Fe Springs, CA
Email: jeremy.squire@murexenv.com Phone: _____ Fax: _____ Turn around time: Mobile lab

Geotracker EDF: Yes ☐ No ☐

Global ID:

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☐ Yes ☐ NoSeal Intact: ☐ Yes ☐ No ☐ N/ACold: ☐ Yes ☐ No ☐ N/A

Temperature:

Special Instructions:

Lab Work Order # E109092 / E112006

Total # of containers

8260B Full List

8260B ☐ BTEX/OXY ☐ TPH gas

8015M TPH ☐ g ☐ d ☐ exf

418.1 TRPH

VOC's - Full list

VOC's: Solv List/DTC ☐ 8260B ☐ TO-15

<input type="checkbox"/> SAM	<input type="checkbox"/> SAM	<input type="checkbox"/> SAM
<input type="checkbox"/> SAM	<input type="checkbox"/> SAM	<input type="checkbox"/> SAM

☐ 0300D ☐ TO 15

	<input type="checkbox"/>	DOOR	<input type="checkbox"/>	TS 15
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[illegible][illegible]

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818 2819 2820

SI-Q1 ☐ QNZQ ☐ _____

LEAK CHECK COMPONDS, I DFLD OTHER

Meinane

Fixed Gases ☐ CO₂ ☐ O₂ ☐ N₂

100

SOIL/GW

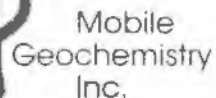
SOIL VAPOR/AIR ANALYSIS

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total #										
		SOIL/GW						SOIL VAPOR/AIR ANALYSIS									
OS-V018-A		333	0910	09/20/11	Glass	Glass				X		X					
OS-V018-B		348	0914		Vapor	Syringe				X		X					
OS-V017-A		333	1011		Vapor					X		X					
OS-V026-B		348	1030							X		X					
OS-V028-A		333	1130							X		X					
OS-V028-B		348	1131							X		X					
OS-V028-B-DUP		348	1132							X		X					
OS-V027-A		333	1235							X		X					
OS-V027-B		348	1238							X		X					
OS-V016-A		333	1400							X		X					
Relinquished by: (Signature)	F. Sait	(company)	MUREX	Received by: (Signature)		(company)	H.P.	Date:	09/20/11	Time:	1500						
Relinquished by: (Signature)		(company)		Received by: (Signature)		(company)		Date:		Time:							
Relinquished by: (Signature)		(company)		Received by: (Signature)		(company)		Date:		Time:							

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back

Sample disposal instruction

☐ Disposal☐ Return to client☐ Pickup



☐ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 09/20/11
H&P Project # MX09201-16
Outside Lab: _____

Client:	Murex Env.	Collector:	Roberto Lepa	Page:	2 of 2
Address:	2640 Walnut Ave. Unit F Tustin, CA 92780	Client Project #	1003-001-200	Project Contact:	Jeremy R. Squire
Email:	jeremy.squire@murexenv.com	Location:	12345 Lakeland Rd., Santa Fe Springs	Phone:	
		Fax:		Turn around time:	Make label

Geotracker EDF: Yes ☒ No ☐

Global ID:

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☐ Yes ☐ NoSeal Intact: ☐ Yes ☐ No ☐ N/ACold: ☐ Yes ☐ No ☐ N/A

Temperature: _____

Special Instructions:

Lab Work Order #

E10902/E112006

Total # of containers

8260B Full List

☐ BTEX/OXY ☐ TPH gas

8015M TPH ☐ a ☐ d ☐ ext

110

12060031

[illegible]

☐ 0-9 ☐ A-Z ☐ SPC

VOC's: SAM, 8260B ☐ SAM A ☐ SAM

Naphthalene ☐ 8260B ☐ TO-15

Oxygenates ☐ 8260B ☐ TO-15

TPHY and ☒ 8260B ☐ TO-15

Systeme ☐ 82300 ☐ TO 15

[illegible]

1-801-222-2222

Leak Check Compounds ~~20~~, 1 UFA □ UINE

Methane

Fixed Gases ☐ CO₂ ☐ O₂ ☐ N₂

[illegible]

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back

Sample disposal instruction

☐ Disposal☐ Return to client☐ Pickup



Mobile
Geochemistry
Inc.

Vapor Sampling with Mobile Lab (Syringe*)

Site Address: 12315 Lakeland Rd., Santa Fe Springs, CA

Date: 09/20/11

Company: Murex Env.

H&P Project #: MX092011-46

Arrival Time: 0700

Field Rep(s): Frome Sosic

H&P Rep(s): Roberto Lopez

Departure Time: 1715

Mike [unclear] Kurt

			Probe Specifications					Sampling Information				Field Notes:
Point ID	Syringe ID #	Sample Time	Probe Depth (ft)	Tubing Length (ft)	Tubing Dia (in.)	Sand Pack Dia (in.)	Sand Pack Ht (in.)	Purge Vol (mL)	Flow Rate (mL/min)	Shut-in Test (✓=Pass)	Probe Pressure (" Hg)	
1 OS-V019-A	90010	0910	5	7	1/8"	1.5	12	333	200.	✓	0	
2 OS-V010-B		0914	10	12	1/8"			348		✓	5.0	
3 OS-V017-A		1010	5	7				333		✓	7.0	
4 OS-V017-B		1011	10	12				333		✓	20+	water in syringe (NO sample)
5 OS-V026-A		1028	5	7				333		✓	20+	Vacuum in sample
6 OS-V026-B		1030	10	12				348		✓	0	
7 OS-V028-A		1130	5	7				333		✓	0	
8 OS-V028-B		1131	10	12				348		✓	0	
9 OS-V028-B-Dup	1132	1235	10	12				333		✓	0	
10 OS-V027-B		1235	10	12				333		✓	0	
11 OS-V027-B		1238	10	12				348		✓	0	
12 OS-V016-A		1400	5	7				333		✓	0	
13 OS-V016-B		1405	10	12				348		✓	15+	
14 OS-V026-A		1620	5	7				333		✓	20+	Vacuum in sample
15 OS-V017-B		1645	10	12				348		✓	5	

over time
approved
by
Luis

Purge Volume Test (PVT) Information

PVT performed on Probe ID:			
Tubing:	Length:	Diameter:	1 Volume:
Sand Pack (if included in purge volume calculation):	Height:	Diameter:	1 Volume:
PVT Increments:	PV =	PV =	PV =
PV Amount Selected:	Selected by:		

Leak Check Information

Leak Check Compound:	<input checked="" type="checkbox"/> 1,1,1-DFA <input type="checkbox"/> 1,1,1,2-TFA <input type="checkbox"/> IPA <input type="checkbox"/> Other
Procedure:	Sprayed LCC onto towel in plastic bag.

* Sample volume in syringe is 50cc unless otherwise noted.

Overtime (hrs):

Client Signature:

*Client did not want to report from this sample due to vacuum

1715



Mobile
Geochemistry
Inc.

Mr. Jeremy Squire
Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

26 September 2011



H&P Project: MX092111-10
Client Project: 1003-001-200 / 12345 Lakeland Rd.

Dear Mr. Jeremy Squire:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 20-Sep-11 which were analyzed in accordance with the attached Chain of Custody record(s).

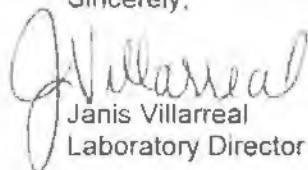
The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

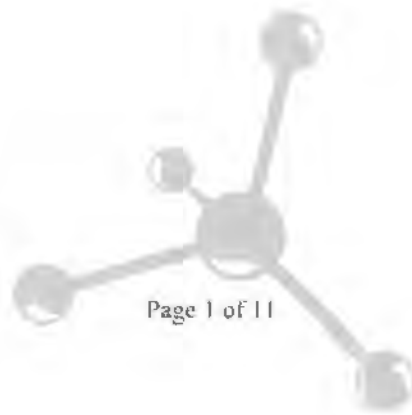
We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,


Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

2470 Impala Drive, Carlsbad, California 92010 ☎ 760.804.9678 — Fax 760.804.9159
1855 Coronado Avenue, Signal Hill, California 90755
www.HandPmg.com 1-800-834-9888





2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OS-VO16-A	E109097-01	Vapor	20-Sep-11	20-Sep-11



2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-VO16-A (E109097-01) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	1	E112107	21-Sep-11	21-Sep-11	EPA TO-15	
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3	"	"	"	"	"	
Chloromethane	ND	2.1	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	7.1	"	"	"	"	"	"	
Vinyl chloride	ND	2.6	"	"	"	"	"	"	
Bromomethane	ND	16	"	"	"	"	"	"	
Chloroethane	ND	8.0	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	5.7	"	"	"	"	"	"	
Acetone	1200	24	"	"	"	"	"	"	E
1,1-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	6.1	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	3.6	3.5	"	"	"	"	"	"	
Carbon disulfide	13	6.3	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	8.0	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.1	"	"	"	"	"	"	
2-Butanone (MEK)	160	30	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.2	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.5	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	4.1	"	"	"	"	"	"	
Benzene	95	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	6.4	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.2	"	"	"	"	"	"	
Trichloroethene	ND	5.5	"	"	"	"	"	"	
1,2-Dichloropropane	ND	9.4	"	"	"	"	"	"	
Bromodichloromethane	ND	6.8	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	9.3	8.3	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	4.6	"	"	"	"	"	"	
Toluene	140	3.8	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.5	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	8.3	"	"	"	"	"	"	
Dibromochloromethane	ND	8.6	"	"	"	"	"	"	
Tetrachloroethene	11	6.9	"	"	"	"	"	"	



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Murex Environmental, Inc.
2640 Walnut Avenue, Unit F
Tustin, CA 92780

Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-VO16-A (E109097-01) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
1,2-Dibromoethane (EDB)	ND	7.8	ug/m3	1	E112107	21-Sep-11	21-Sep-11	EPA TO-15	
1,1,1,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
Chlorobenzene	ND	4.7	"	"	"	"	"	"	
Ethylbenzene	21	4.4	"	"	"	"	"	"	
m,p-Xylene	80	8.8	"	"	"	"	"	"	
Styrene	ND	4.3	"	"	"	"	"	"	
o-Xylene	23	4.4	"	"	"	"	"	"	
Bromoform	ND	10	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	7.0	"	"	"	"	"	"	
4-Ethyltoluene	7.1	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	6.2	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	36	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	12	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.5	"	"	"	"	"	"	
Hexachlorobutadiene	ND	11	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		99.1 %	76-134		"	"	"	"	
Surrogate: Toluene-d8		102 %	78-125		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	77-127		"	"	"	"	



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Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

TPHv on Vapors by EPA Method TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
OS-VO16-A (E109097-01) Vapor Sampled: 20-Sep-11 Received: 20-Sep-11									
TPHv (C5 - C11)	1800	100	ug/m3	1	E112107	21-Sep-11	21-Sep-11	EPA TO-15	



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Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EI12107 - TO-15

Blank (EI12107-BLK1)

Prepared & Analyzed: 21-Sep-11

1,1-Difluoroethane (LCC)	ND	10	ug/l
Dichlorodifluoromethane (F12)	ND	5.0	ug/m3
Chloromethane	ND	2.1	"
Dichlorotetrafluoroethane (F114)	ND	7.1	"
Vinyl chloride	ND	2.6	"
Bromomethane	ND	16	"
Chloroethane	ND	8.0	"
Trichlorofluoromethane (F11)	ND	5.7	"
Acetone	ND	24	"
1,1-Dichloroethene	ND	4.0	"
Tertiary-butyl alcohol (TBA)	ND	6.1	"
1,1,2-Trichlorotrifluoroethane (F113)	ND	7.7	"
Methylene chloride (Dichloromethane)	ND	3.5	"
Carbon disulfide	ND	6.3	"
trans-1,2-Dichloroethene	ND	8.0	"
Methyl tertiary-butyl ether (MTBE)	ND	3.7	"
1,1-Dichloroethane	ND	4.1	"
2-Butanone (MEK)	ND	30	"
cis-1,2-Dichloroethene	ND	4.0	"
Diisopropyl ether (DIPE)	ND	4.2	"
Chloroform	ND	5.0	"
Ethyl tert-butyl ether (ETBE)	ND	4.2	"
1,1,1-Trichloroethane	ND	5.5	"
1,2-Dichloroethane (EDC)	ND	4.1	"
Benzene	ND	3.2	"
Carbon tetrachloride	ND	6.4	"
Tertiary-amyl methyl ether (TAME)	ND	4.2	"
Trichloroethene	ND	5.5	"
1,2-Dichloropropane	ND	9.4	"
Bromodichloromethane	ND	6.8	"
cis-1,3-Dichloropropene	ND	4.6	"
4-Methyl-2-pentanone (MIBK)	ND	8.3	"
trans-1,3-Dichloropropene	ND	4.6	"
Toluene	ND	3.8	"



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Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EI12107 - TO-15

Blank (EI12107-BLK1)

Prepared & Analyzed: 21-Sep-11

1,1,2-Trichloroethane	ND	5.5	ug/m3
2-Hexanone (MBK)	ND	8.3	"
Dibromochloromethane	ND	8.6	"
Tetrachloroethene	ND	6.9	"
1,2-Dibromoethane (EDB)	ND	7.8	"
1,1,1,2-Tetrachloroethane	ND	7.0	"
Chlorobenzene	ND	4.7	"
Ethylbenzene	ND	4.4	"
m,p-Xylene	ND	8.8	"
Styrene	ND	4.3	"
o-Xylene	ND	4.4	"
Bromoform	ND	10	"
1,1,2,2-Tetrachloroethane	ND	7.0	"
4-Ethyltoluene	ND	5.0	"
1,3,5-Trimethylbenzene	ND	5.0	"
1,2,4-Trimethylbenzene	ND	5.0	"
1,3-Dichlorobenzene	ND	12	"
1,4-Dichlorobenzene	ND	12	"
1,2-Dichlorobenzene	ND	12	"
1,2,4-Trichlorobenzene	ND	7.5	"
Hexachlorobutadiene	ND	11	"

<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>196</i>	<i>"</i>	<i>214</i>	<i>91.5</i>	<i>76-134</i>
<i>Surrogate: Toluene-d8</i>	<i>180</i>	<i>"</i>	<i>207</i>	<i>86.8</i>	<i>78-125</i>
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>408</i>	<i>"</i>	<i>365</i>	<i>112</i>	<i>77-127</i>

LCS (EI12107-BS1)

Prepared & Analyzed: 21-Sep-11

Dichlorodifluoromethane (F12)	110	5.0	ug/m3	101	111	65-135
Vinyl chloride	53	2.6	"	52.0	101	65-135
Chloroethane	57	8.0	"	53.6	105	65-135
Trichlorofluoromethane (F11)	100	5.7	"	113	90.5	65-135
1,1-Dichloroethene	82	4.0	"	80.8	101	65-135
1,1,2-Trichlorotrifluoroethane (F113)	150	7.7	"	155	96.8	65-135
Methylene chloride (Dichloromethane)	60	3.5	"	70.8	85.0	65-135



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2640 Walnut Avenue, Unit F
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Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EI12107 - TO-15

LCS (EI12107-BS1)

Prepared & Analyzed: 21-Sep-11

trans-1,2-Dichloroethene	81	8.0	ug/m3	80.8		101	65-135			
1,1-Dichloroethane	80	4.1	"	82.4		97.0	65-135			
cis-1,2-Dichloroethene	79	4.0	"	80.0		98.8	65-135			
Chloroform	94	5.0	"	99.2		94.4	65-135			
1,1,1-Trichloroethane	110	5.5	"	111		97.1	65-135			
1,2-Dichloroethane (EDC)	81	4.1	"	82.4		97.9	65-135			
Benzene	69	3.2	"	64.8		106	65-135			
Carbon tetrachloride	130	6.4	"	128		102	65-135			
Trichloroethene	110	5.5	"	110		99.5	65-135			
Toluene	74	3.8	"	76.8		97.0	65-135			
1,1,2-Trichloroethane	130	5.5	"	111		120	65-135			
Tetrachloroethene	130	6.9	"	138		95.3	65-135			
1,1,1,2-Tetrachloroethane	140	7.0	"	140		97.3	65-135			
Ethylbenzene	110	4.4	"	88.4		126	65-135			
m,p-Xylene	220	8.8	"	177		123	65-135			
o-Xylene	110	4.4	"	88.4		121	65-135			
1,1,2,2-Tetrachloroethane	150	7.0	"	140		110	65-135			

Surrogate: 1,2-Dichloroethane-d4	219		"	214		102	76-134			
Surrogate: Toluene-d8	214		"	207		103	78-125			
Surrogate: 4-Bromofluorobenzene	489		"	365		134	77-127			

S-GC



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Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

TPHv on Vapors by EPA Method TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EI12107 - TO-15

Blank (EI12107-BLK1)

Prepared & Analyzed: 21-Sep-11

TPHv (C5 - C11)	ND	100	ug/m3
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Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate(s).
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



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Project: MX092111-10
Project Number: 1003-001-200 / 12345 Lakeland Rd.
Project Manager: Mr. Jeremy Squire

Reported:
26-Sep-11 13:34

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS

Certificate# 2742, 2745, & 2741 approved for LUFT

Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.



Date: 9-20-11

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☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

H&P Project # MX092011-577/46

Outside Lab: MY092111-10

Client: MUREX ENVIRONMENTAL Collector: WYLC Scherer Page: 1 of 1
Address: 2640 Walnut Ave., Unit F Tustin, CA Client Project # 1003-001-200 Project Contact: Jeremy Squire
Location: 12345 Lakeland Road Santa Fe Springs, CA
Email: _____ Phone: (714) 508-0800 Fax: (714) 508-0880 Turn around time: _____

Geotracker EDF: Yes ☐ No ☐

Global ID:

Excel EDD: Yes ☐ No ☐

Sample Receipt

Intact: ☒ Yes ☐ No

Seal Intact: ☐ Yes ☐ No ☒ N/A

Cold: ☐ Yes ☐ No ☒ N/A

Temperature: 14

Special Instructions

Lab Work Order # E109097

Total # of containers

8260B Full List

8260B ☐ BTEX/OXY ☐ TPH GAS8015M TPH ☐ g ☐ d ☐ ext

418.1 TRPH

VOC's: Full list ☒ 2-23-08 ☒ 10-15

VOC's Shop | Ig/DTSC □ 8260B □ TO-15

☐ JOC's SAM 8260B ☐ SAM A ☐ SAM B

☐ 82808 ☐ TO 15

☐ 82608 ☒ TO 15

DATE 09/09/00 ☒ TO 15

☐ 07200 ☐ TO 15

[illegible]




1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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 $CA \cdot H$ [illegible]

Relinquished by: (Signature)  F. Sosa	(company) MUREX	Received by: (Signature)  M. H.	(company) H&D	Date: 9-26-11	Time: 1500
Relinquished by: (Signature) 	(company)	Received by: (Signature)	(company)	Date:	Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction:

☐ Disposal☐ Return to client☐ Pickup

Appendix C

DATA ENTRY SHEET

SG-ADV
Version 3.1; 02/04

Reset to
Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	1.00E+00			Benzene

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_S (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Totals must add up to value of L_S (cell F24)			ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, (Enter value or 0) h_B (cm)	Thickness of soil stratum C, (Enter value or 0) h_C (cm)						
9	152.4	20.0	19	30	103.4	S		

MORE
↓

ENTER Stratum A SCS soil type Lookup Soil Parameters	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type Lookup Soil Parameters	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type Lookup Soil Parameters	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
S	1.66	0.375	0.054	S	1.8	0.3	0.15	LS	1.65	0.377	0.196

MORE
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ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($\text{g}/\text{cm} \cdot \text{s}^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
9	40	1000	1000	244	1.25	1	5

END

Appendix D

INTERMEDIATE CALCULATIONS SHEET

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm ³ /cm ³)	Stratum B soil air-filled porosity, θ_a^B (cm ³ /cm ³)	Stratum C soil air-filled porosity, θ_a^C (cm ³ /cm ³)	Stratum A effective total fluid saturation, S_{te} (cm ³ /cm ³)	Stratum A soil intrinsic permeability, k_i (cm ²)	Stratum A soil relative air permeability, k_{rg} (cm ²)	Stratum A soil effective vapor permeability, k_v (cm ²)	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu\text{g}/\text{m}^3$)	Bldg. ventilation rate, $Q_{building}$ (cm ³ /s)
7.88E+08	143.4	0.321	0.150	0.181	0.003	1.01E-07	0.998	1.01E-07	4,000	5.10E+03	6.77E+04
Area of enclosed space below grade, A_B (cm ²)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} (atm-m ³ /mol)	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D_A^{eff} (cm ² /s)	Stratum B effective diffusion coefficient, D_B^{eff} (cm ² /s)	Stratum C effective diffusion coefficient, D_C^{eff} (cm ² /s)	Total overall effective diffusion coefficient, D_T^{eff} (cm ² /s)	Diffusion path length, L_d (cm)
1.00E+06	5.00E-03	9	8,019	4.39E-03	1.83E-01	1.78E-04	1.42E-02	1.77E-03	2.10E-03	2.14E-03	143.4
Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu\text{g}/\text{m}^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm ³ /s)	Crack effective diffusion coefficient, D^{crack} (cm ² /s)	Area of crack, A_{crack} (cm ²)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu\text{g}/\text{m}^3$)	Unit risk factor, URF ($\mu\text{g}/\text{m}^3$) ⁻¹	Reference conc., RfC (mg/m ³)	
9	5.10E+03	1.25	8.33E+01	1.42E-02	5.00E+03	3.80E+04	1.87E-04	9.54E-01	2.9E-05	6.0E-02	
END											